FIG.1

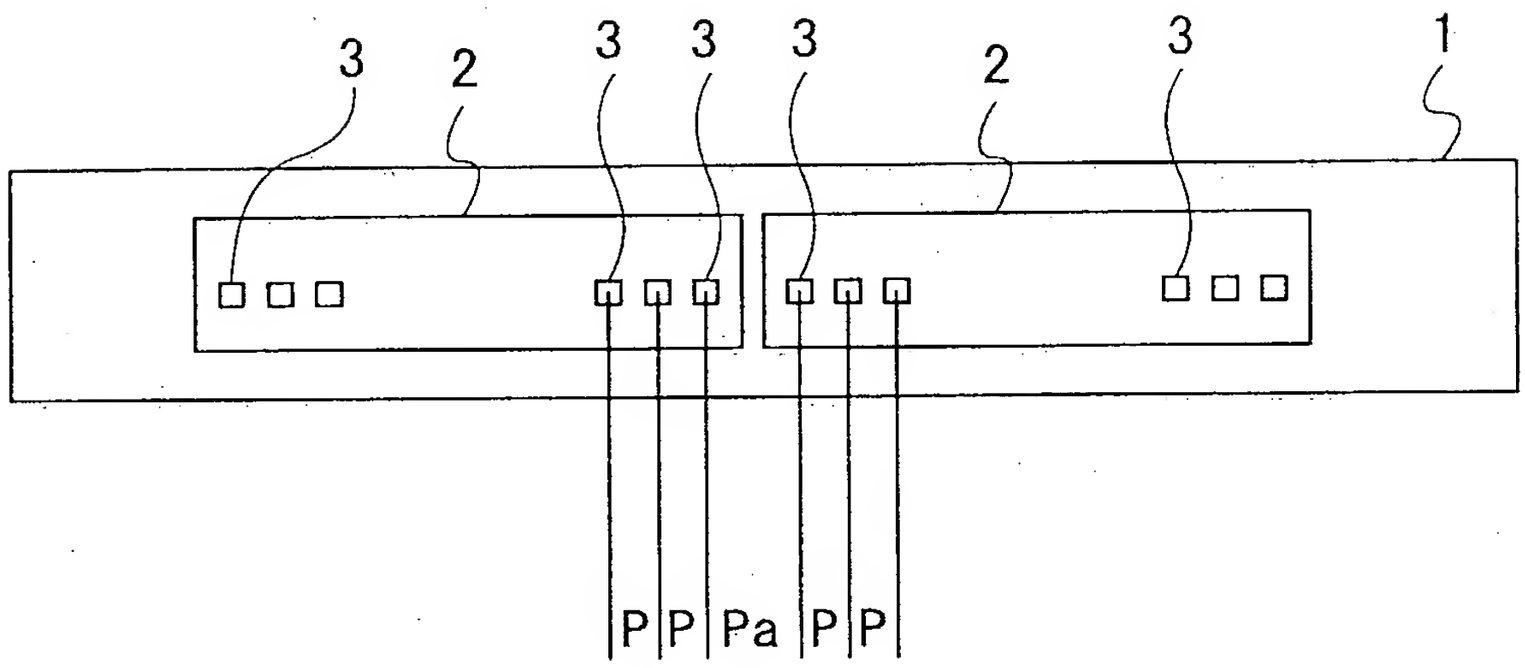


FIG.2

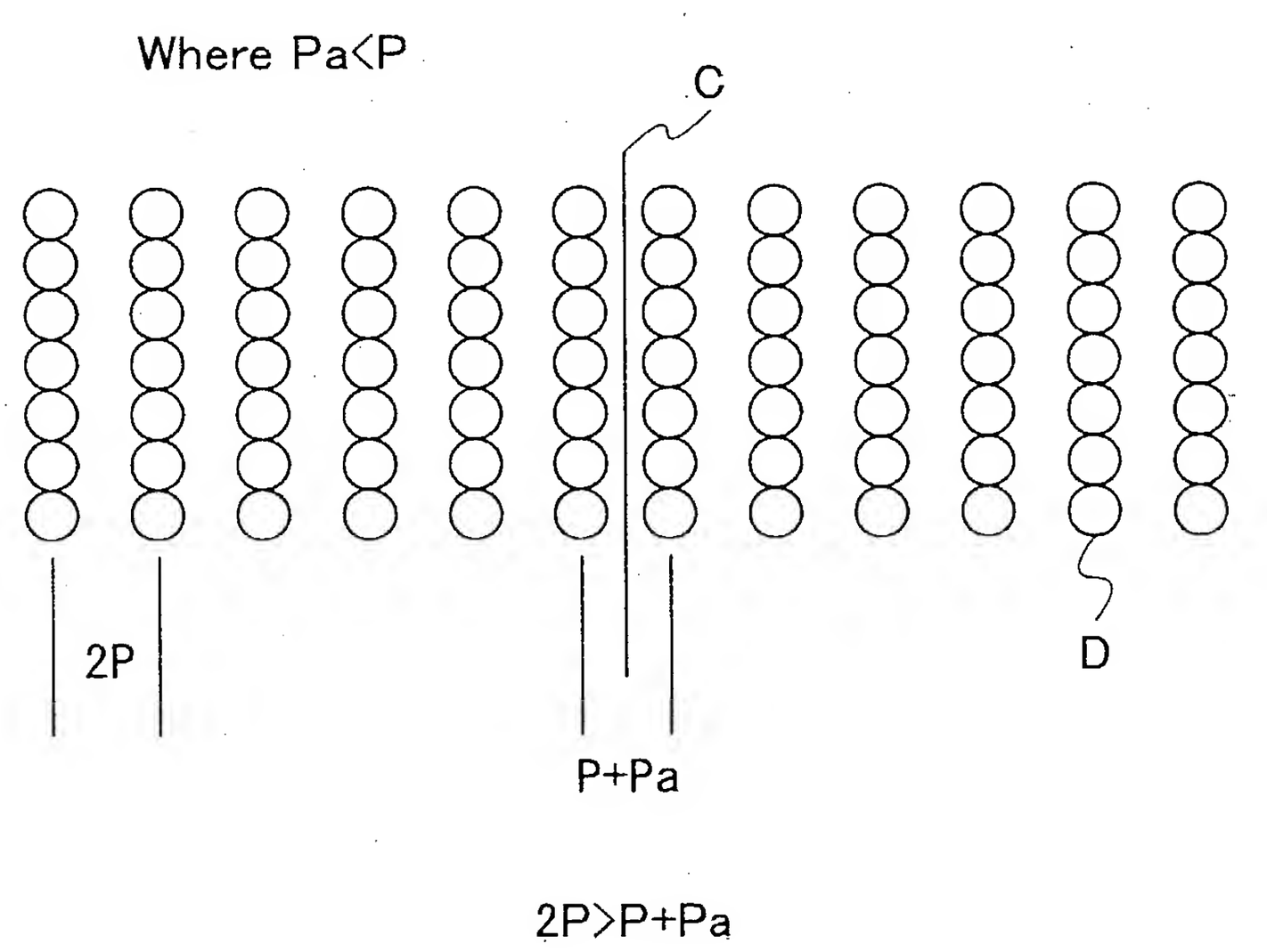


FIG.3

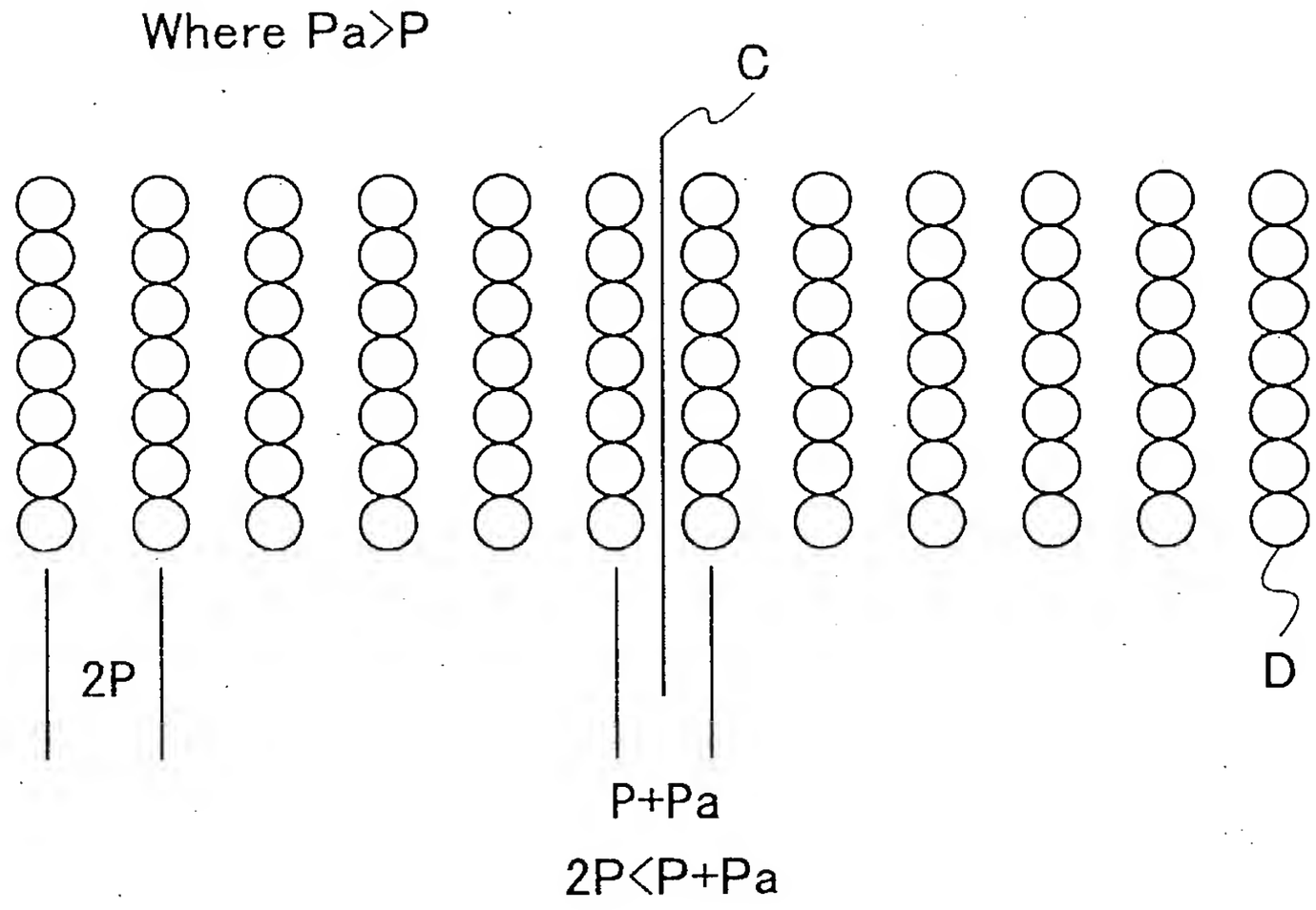


FIG.4

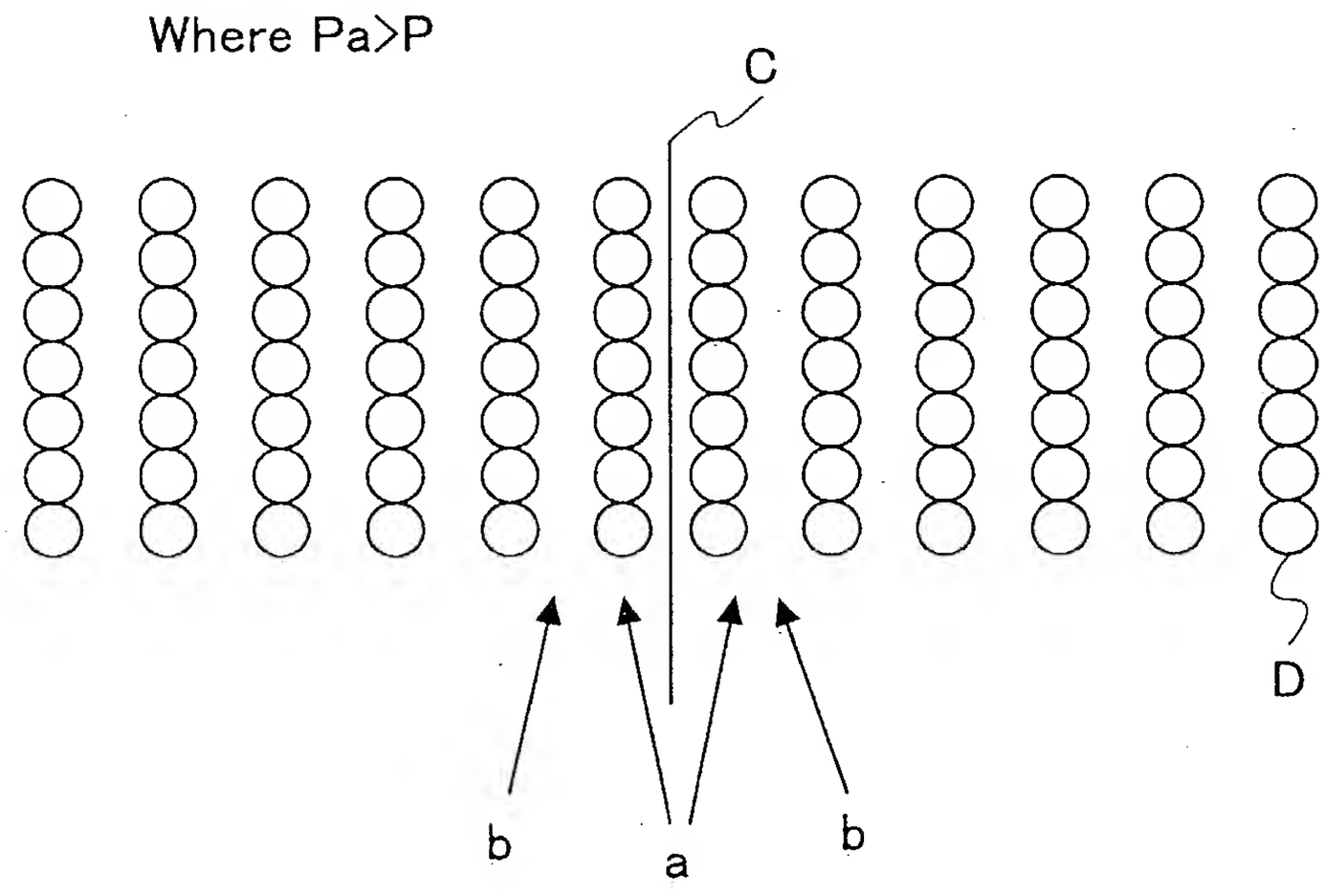


FIG.5

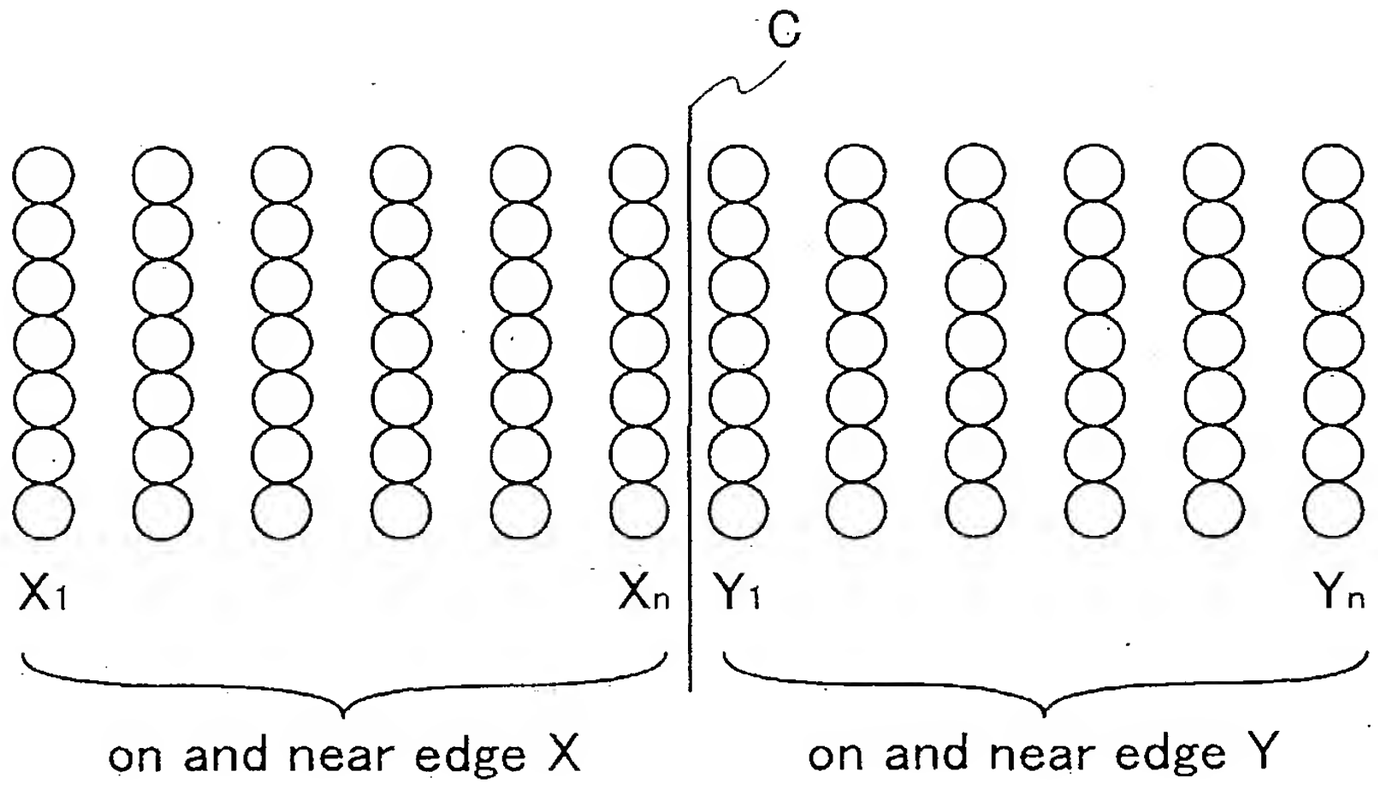

C
X1
Xn
Y1
Yn
on and near edge X
on and near edge Y

FIG.6

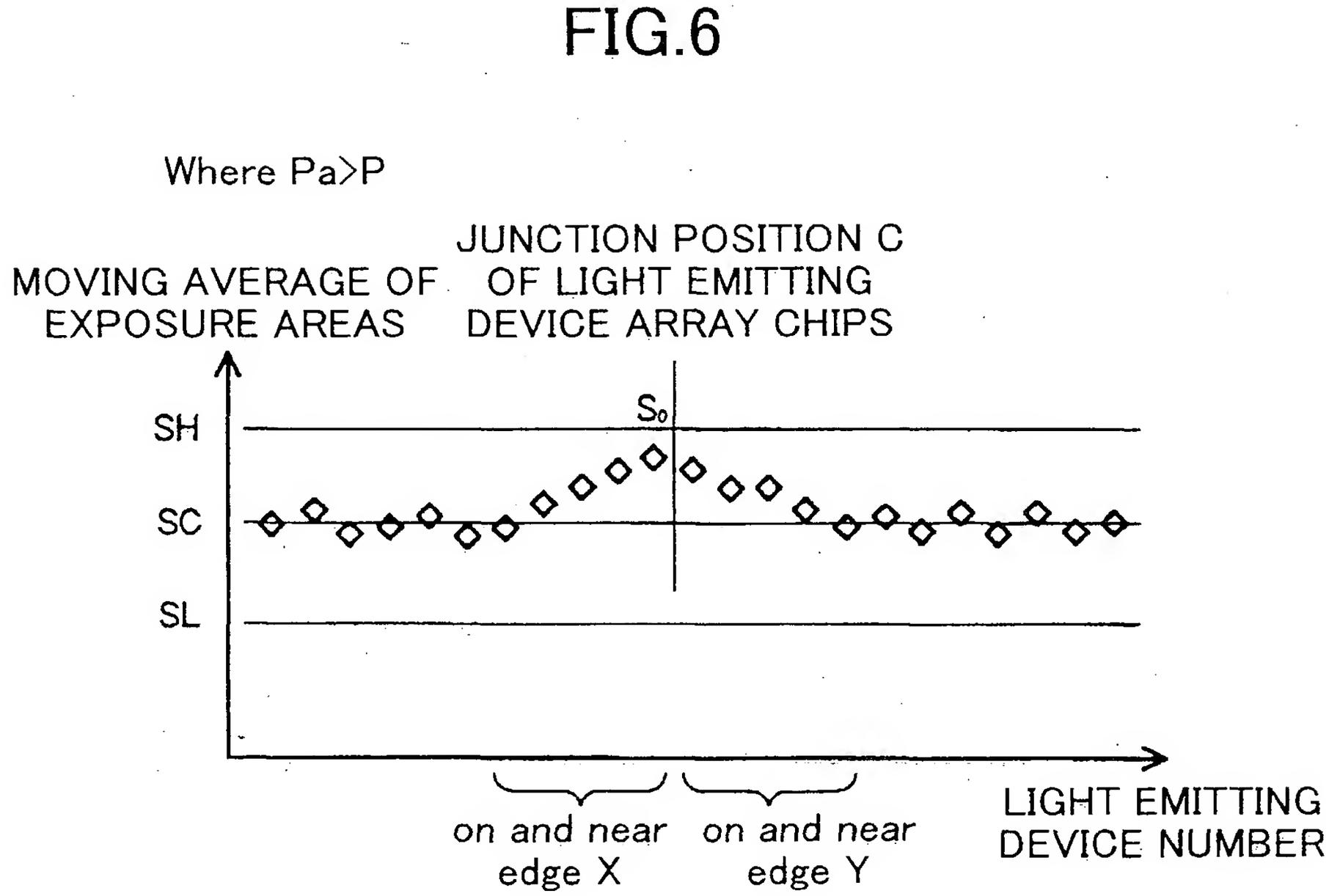

Where Pa>P
JUNCTION POSITION C OF LIGHT EMITTING DEVICE ARRAY CHIPS
MOVING AVERAGE OF EXPOSURE AREAS
S0
SH
SC
SL
on and near edge X
on and near edge Y
LIGHT EMITTING DEVICE NUMBER

FIG.7

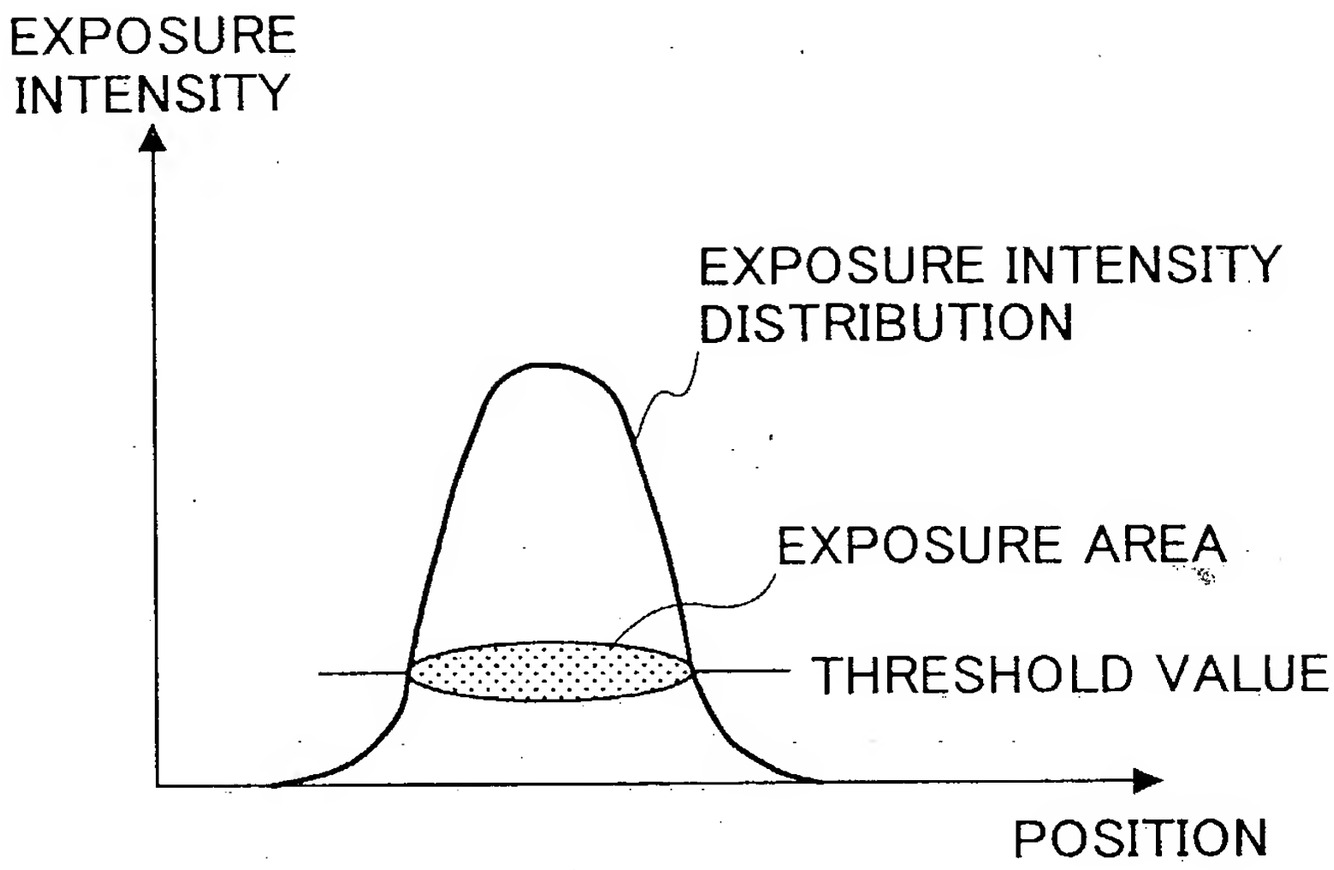

EXPOSURE
INTENSITY
EXPOSURE INTENSITY
DISTRIBUTION
EXPOSURE AREA
THRESHOLD VALUE
POSITION

FIG.8

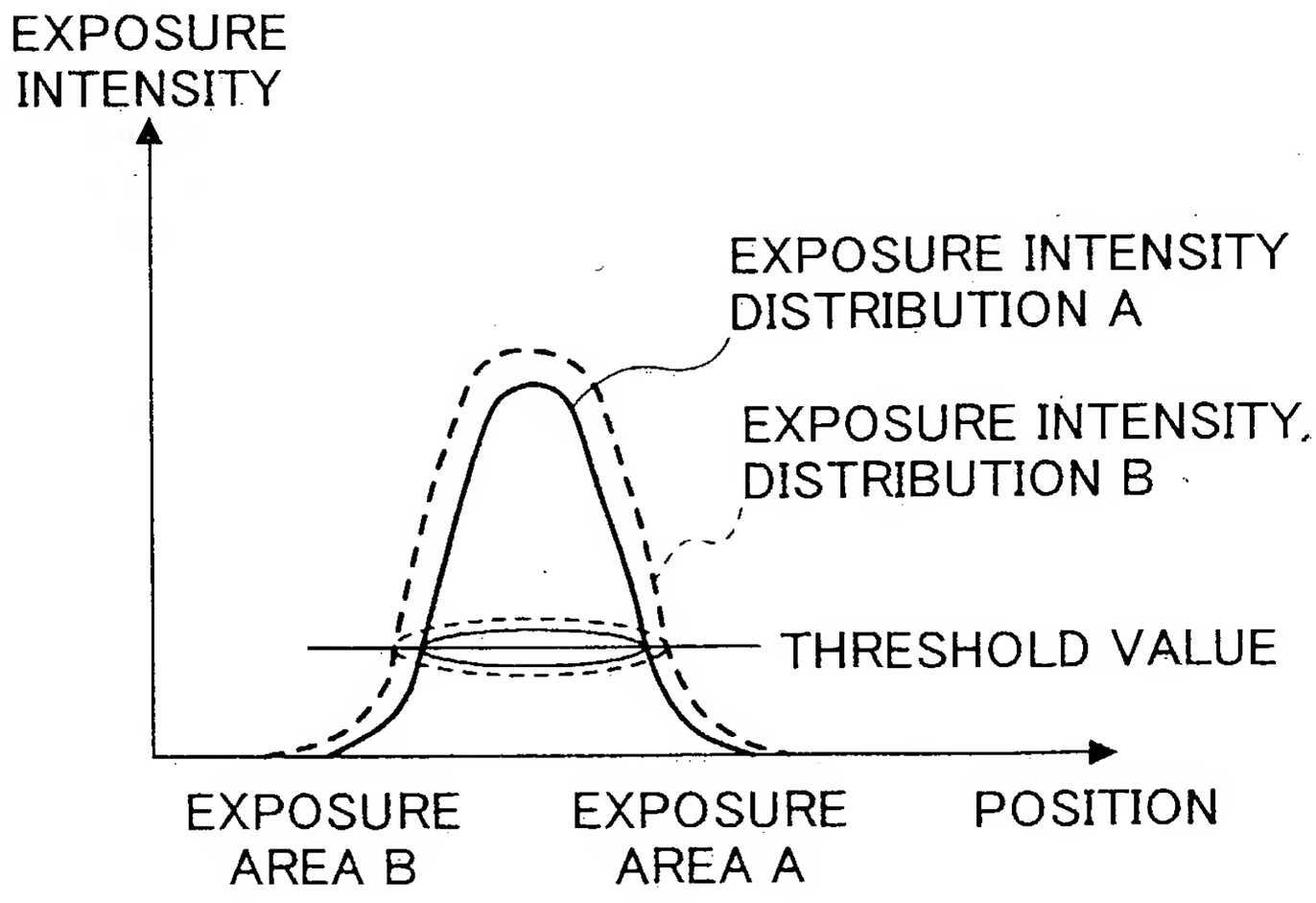

EXPOSURE
INTENSITY
EXPOSURE INTENSITY
DISTRIBUTION A
EXPOSURE INTENSITY
DISTRIBUTION B
THRESHOLD VALUE
EXPOSURE
AREA B
EXPOSURE
AREA A
POSITION

FIG.9

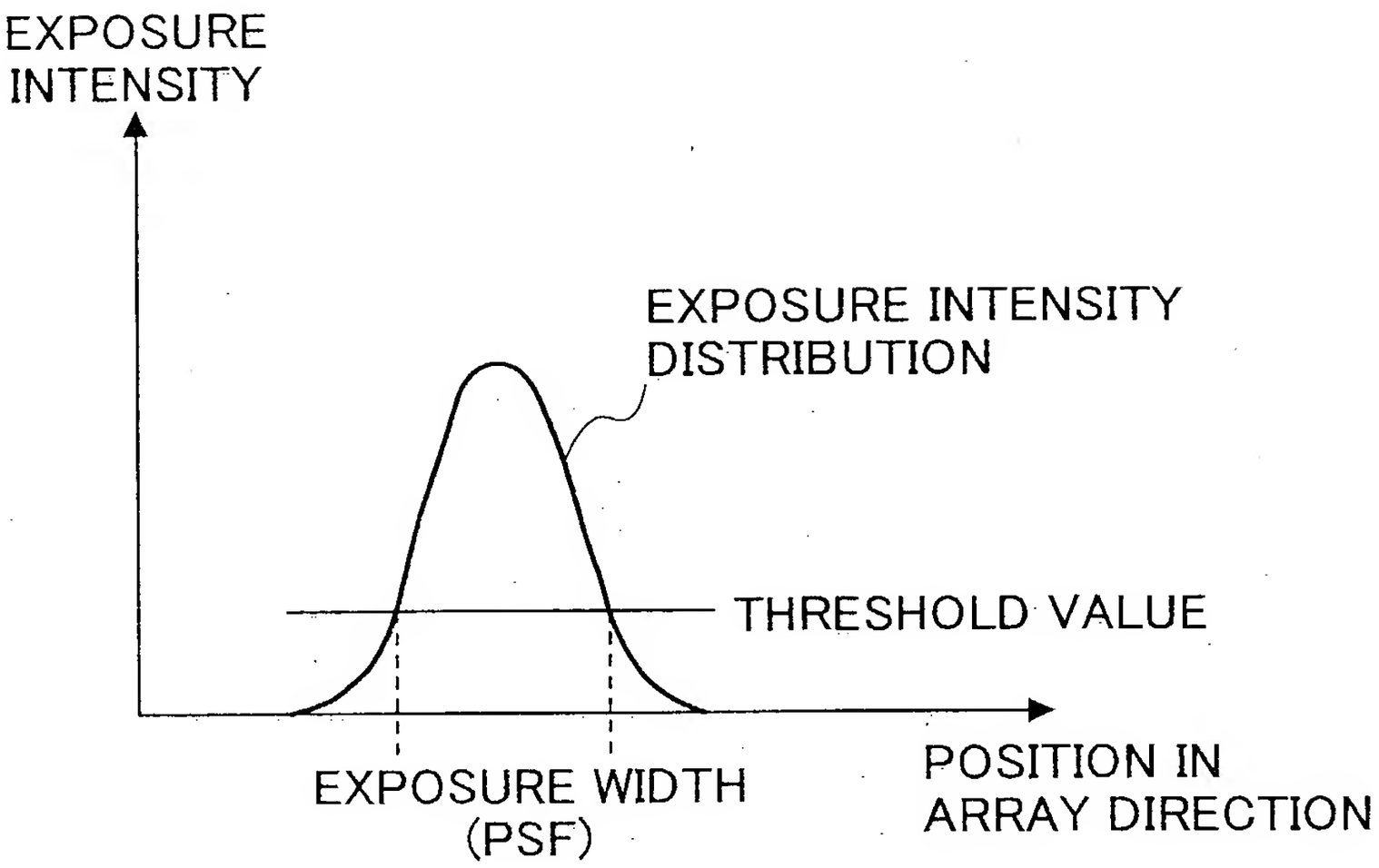

EXPOSURE
INTENSITY
EXPOSURE INTENSITY
DISTRIBUTION
THRESHOLD VALUE
EXPOSURE WIDTH
(PSF)
POSITION IN
ARRAY DIRECTION

FIG.10

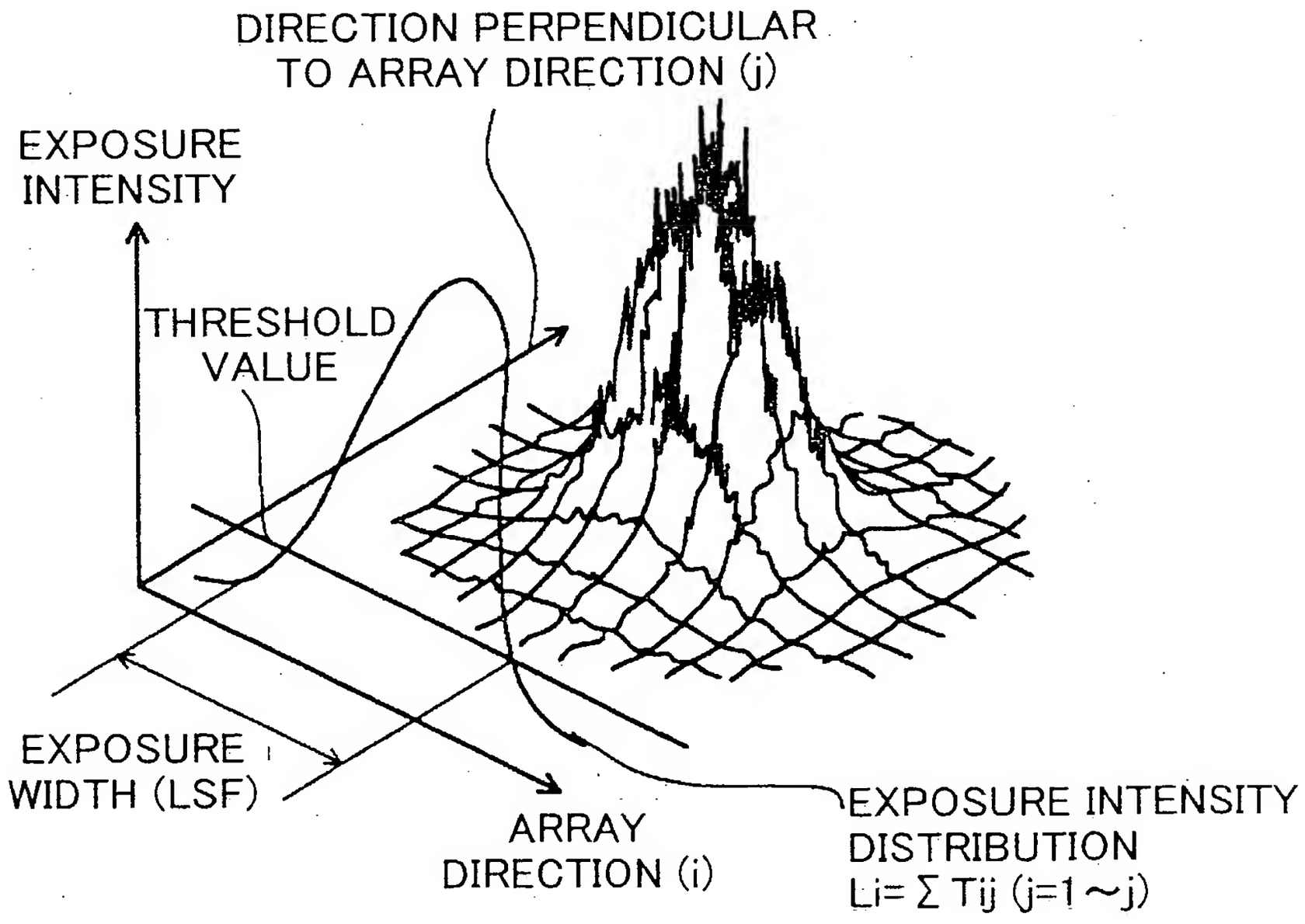

DIRECTION PERPENDICULAR
TO ARRAY DIRECTION (j)
EXPOSURE
INTENSITY
THRESHOLD
VALUE
EXPOSURE
WIDTH (LSF)
ARRAY
DIRECTION (i)
EXPOSURE INTENSITY
DISTRIBUTION
Li= Σ Tij (j=1 ~ j)

FIG.11

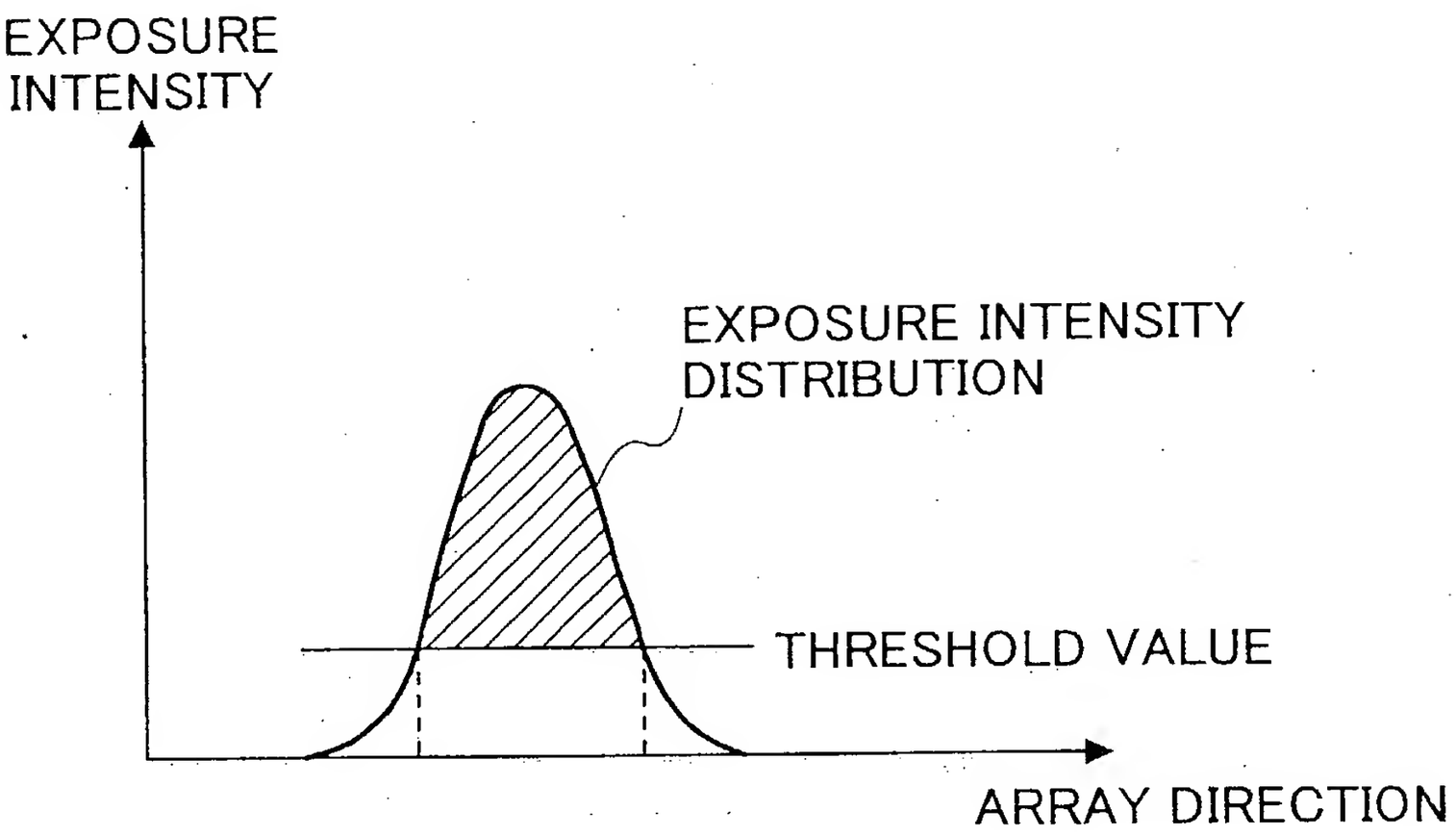

EXPOSURE INTENSITY
EXPOSURE INTENSITY DISTRIBUTION
THRESHOLD VALUE
ARRAY DIRECTION

FIG.12

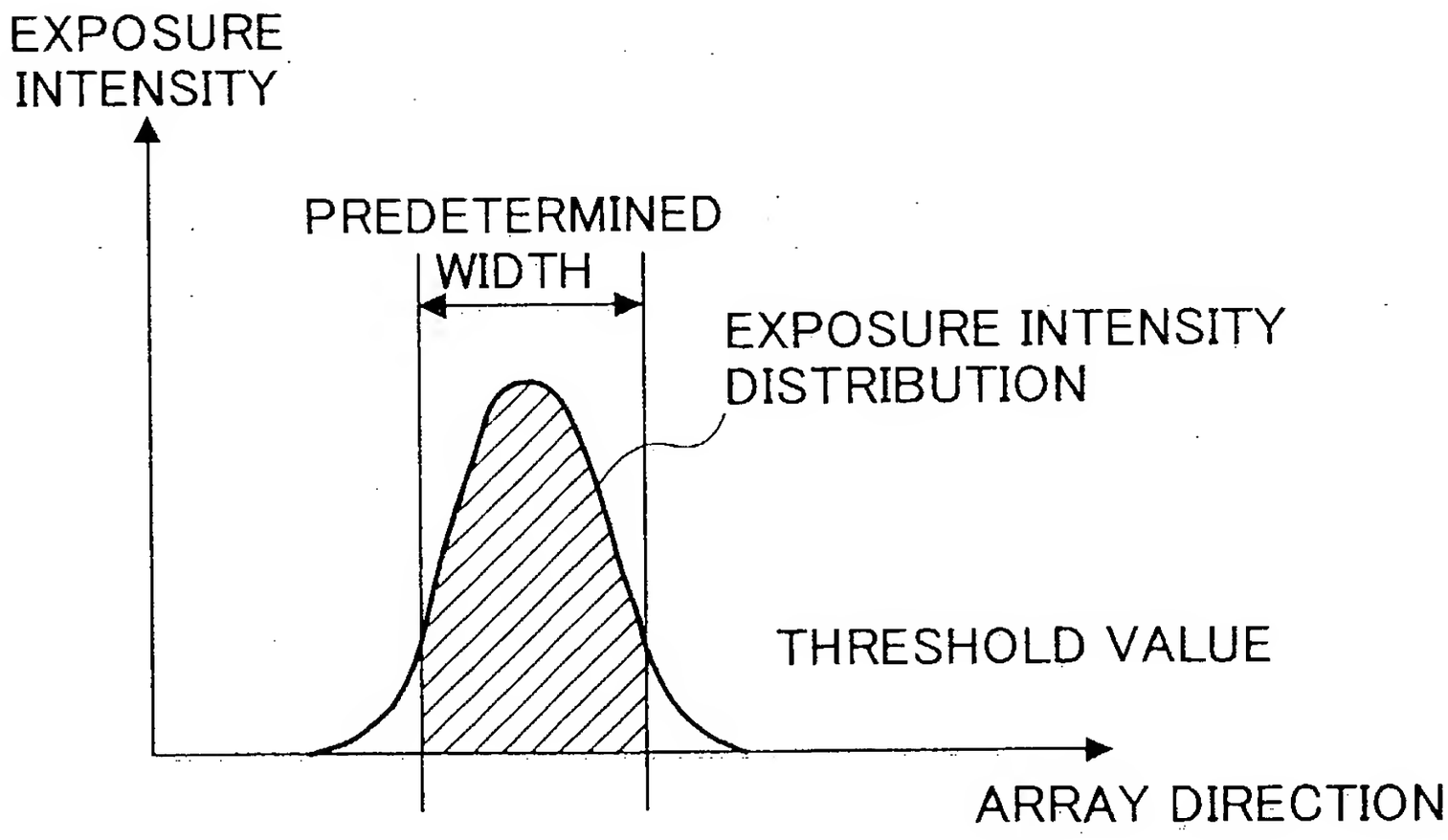

EXPOSURE INTENSITY
PREDETERMINED WIDTH
EXPOSURE INTENSITY DISTRIBUTION
THRESHOLD VALUE
ARRAY DIRECTION

FIG.13

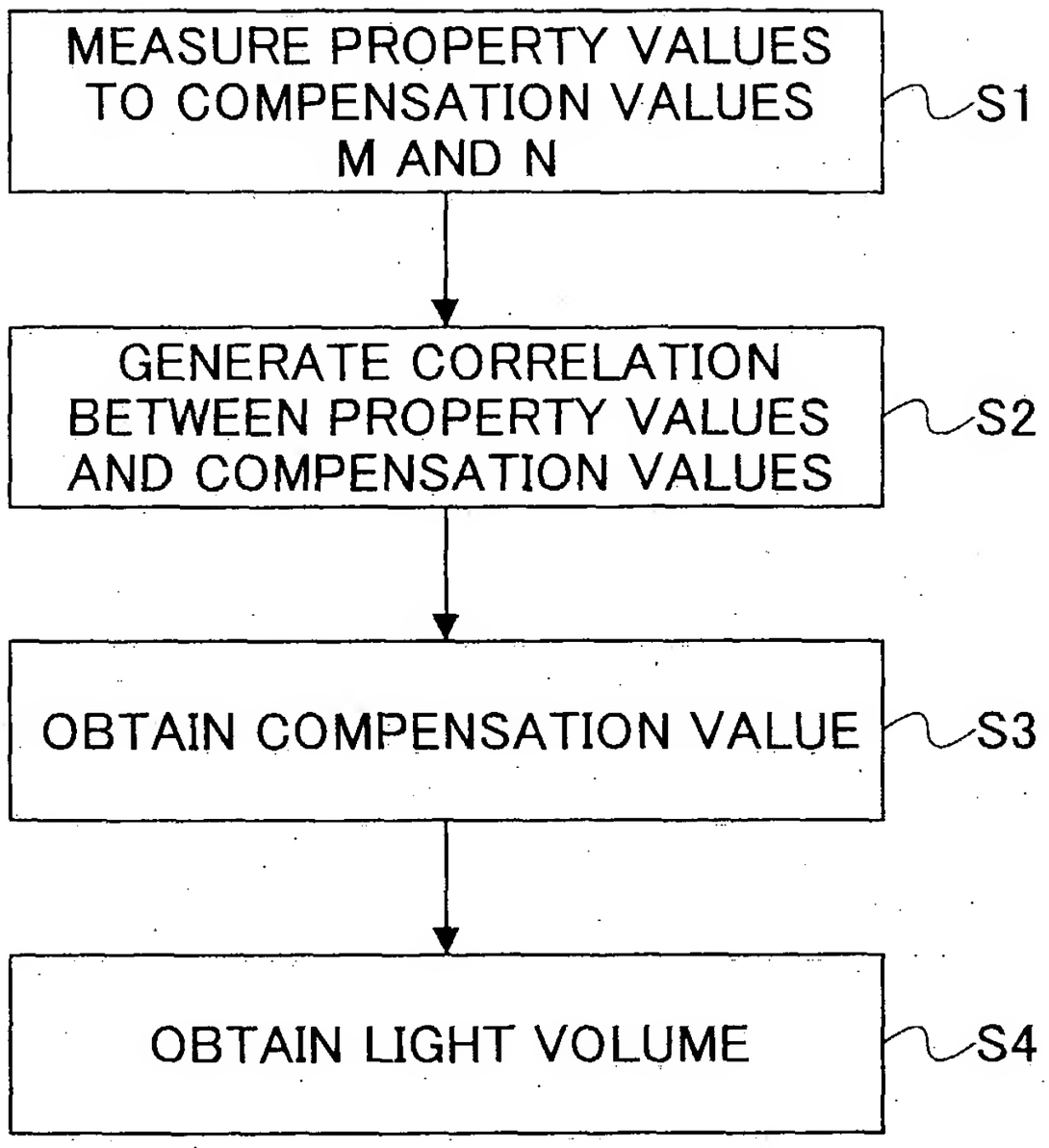

MEASURE PROPERTY VALUES TO COMPENSATION VALUES M AND N
S1
GENERATE CORRELATION BETWEEN PROPERTY VALUES AND COMPENSATION VALUES
S2
OBTAIN COMPENSATION VALUE
S3
OBTAIN LIGHT VOLUME
S4

FIG.14

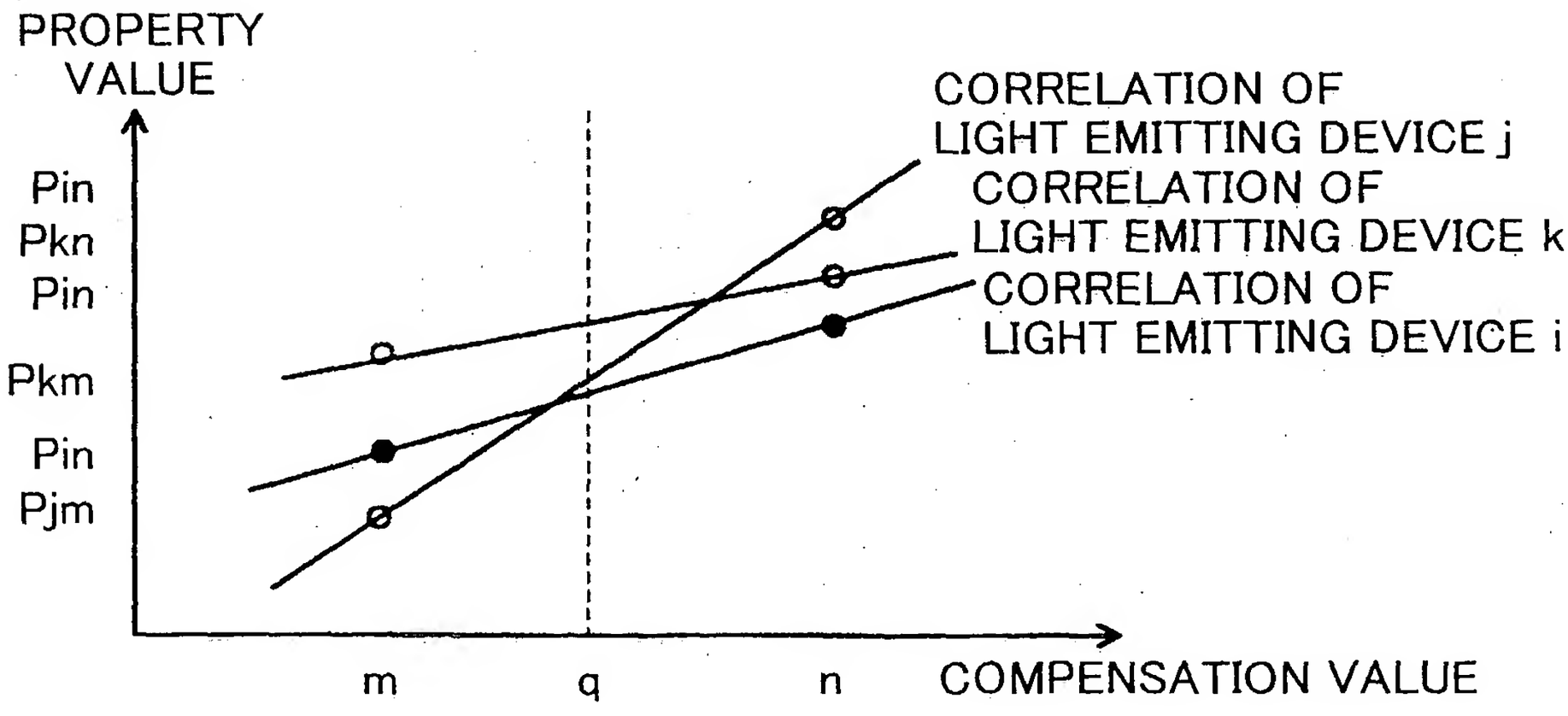

PROPERTY VALUE
Pin
Pkn
Pin
Pkm
Pin
Pjm
m
q
n
COMPENSATION VALUE
CORRELATION OF LIGHT EMITTING DEVICE j
CORRELATION OF LIGHT EMITTING DEVICE k
CORRELATION OF LIGHT EMITTING DEVICE i

FIG.15

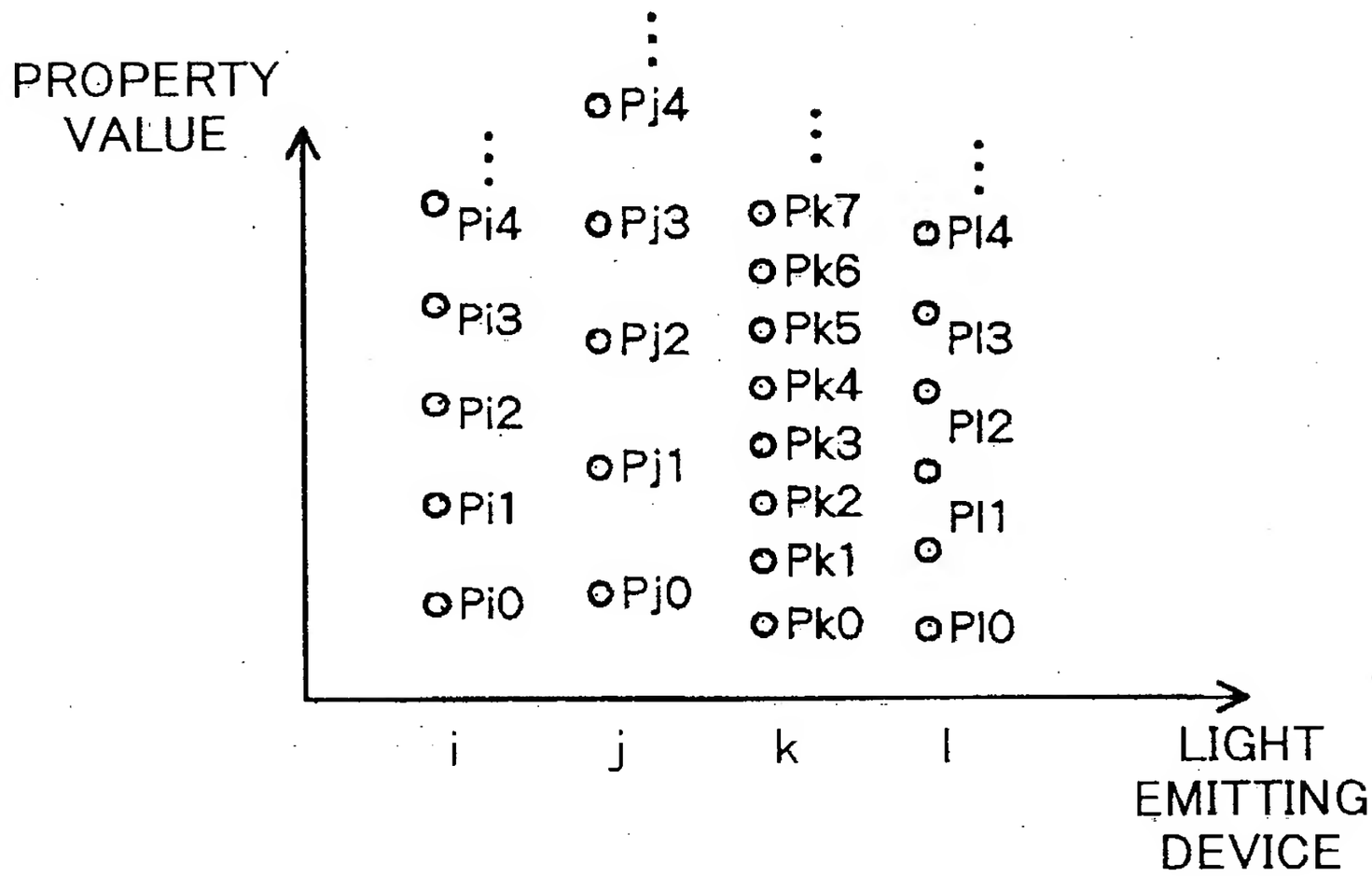

PROPERTY VALUE
Pj4
Pi4
Pj3
Pk7
Pl4
Pk6
Pi3
Pj2
Pk5
Pl3
Pk4
Pi2
Pl2
Pk3
Pj1
Pl1
Pk2
Pi1
Pk1
Pi0
Pj0
Pk0
Pl0
i
j
k
l
LIGHT EMITTING DEVICE

FIG.16

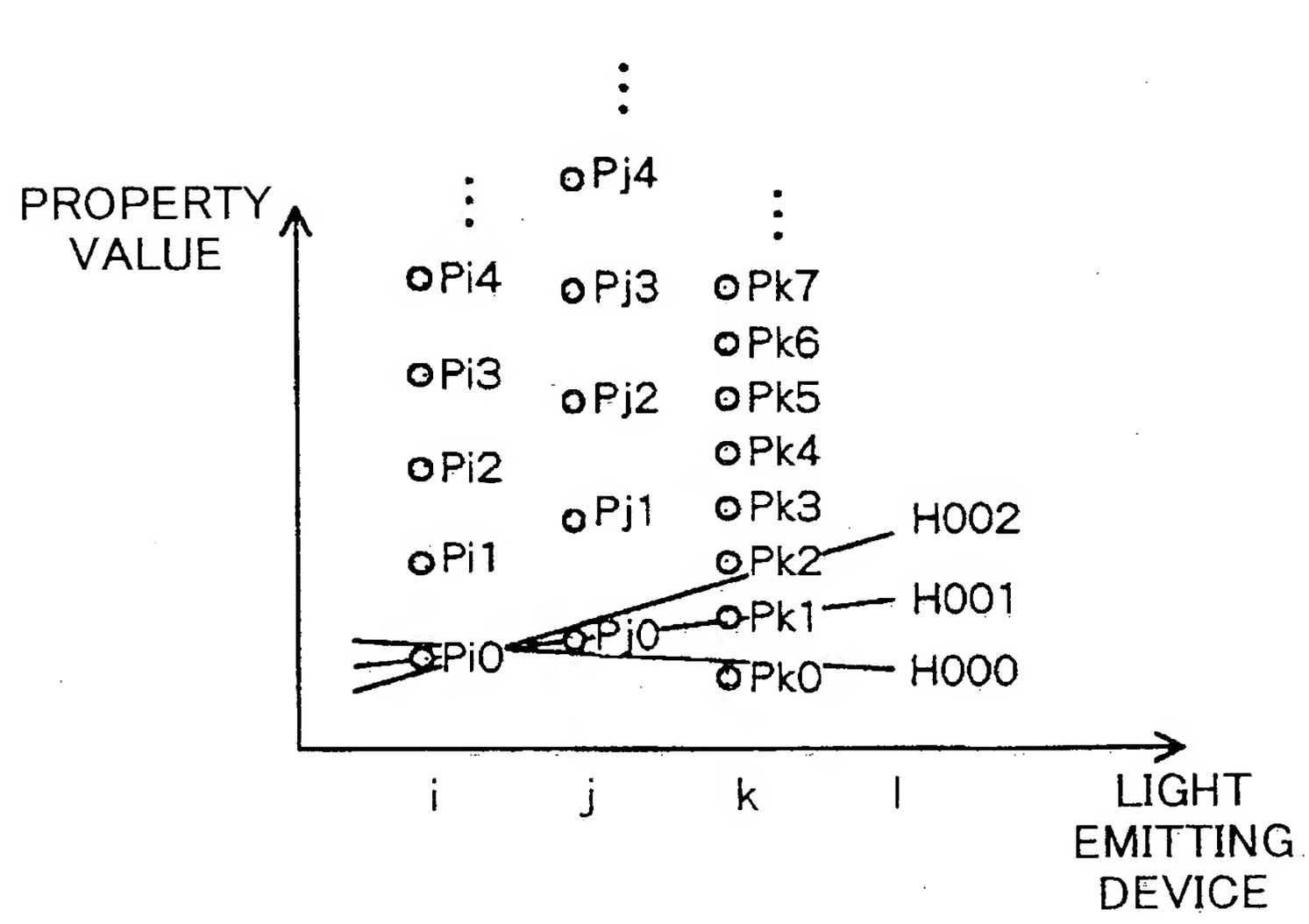

PROPERTY VALUE
Pj4
Pi4
Pj3
Pk7
Pk6
Pi3
Pj2
Pk5
Pk4
Pi2
Pk3
H002
Pj1
Pi1
Pk2
H001
Pk1
Pj0
Pi0
Pk0
H000
i
j
k
l
LIGHT EMITTING DEVICE

FIG.17

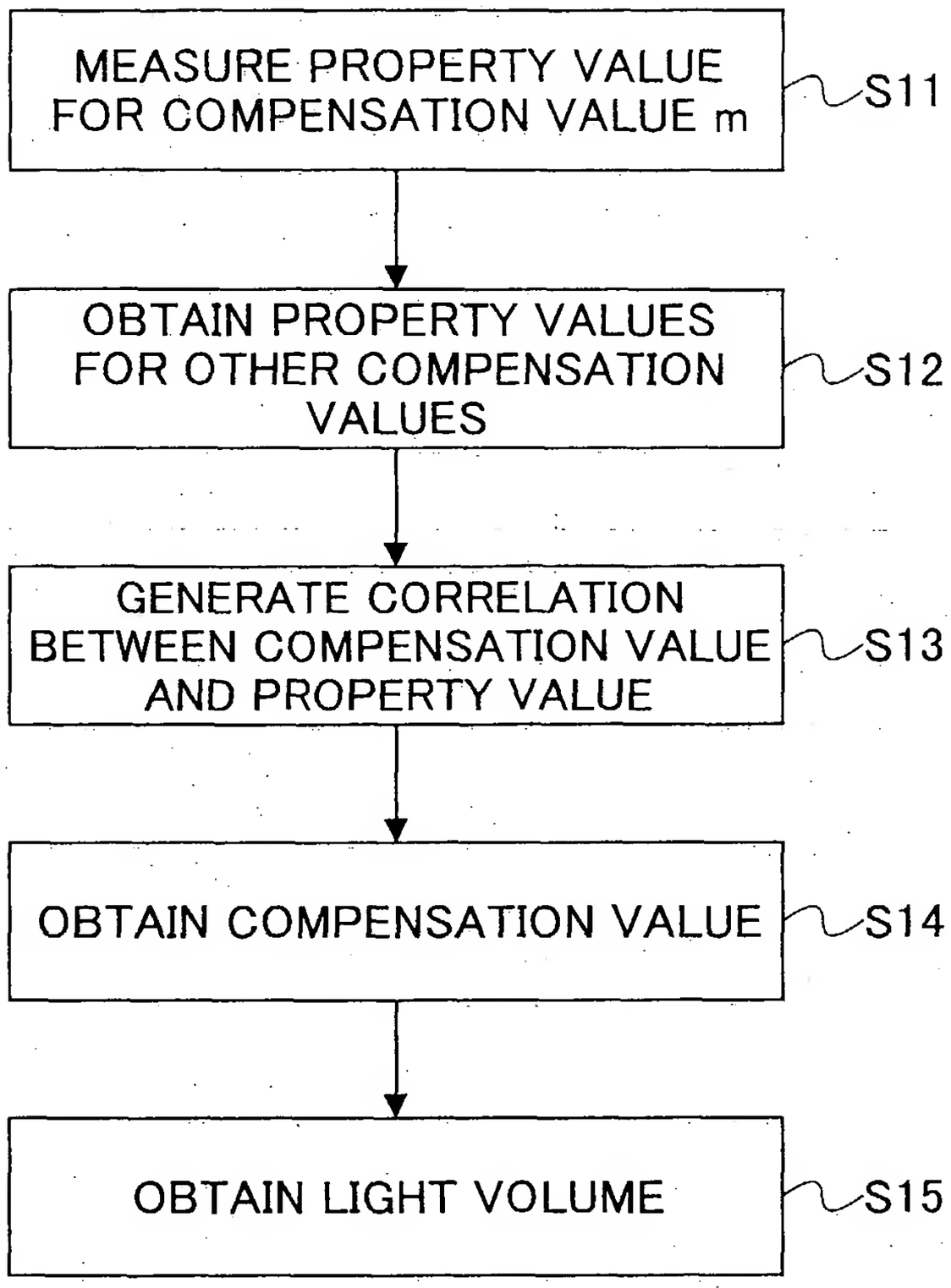

MEASURE PROPERTY VALUE FOR COMPENSATION VALUE m
S11
OBTAIN PROPERTY VALUES FOR OTHER COMPENSATION VALUES
S12
GENERATE CORRELATION BETWEEN COMPENSATION VALUE AND PROPERTY VALUE
S13
OBTAIN COMPENSATION VALUE
S14
OBTAIN LIGHT VOLUME
S15

FIG.18

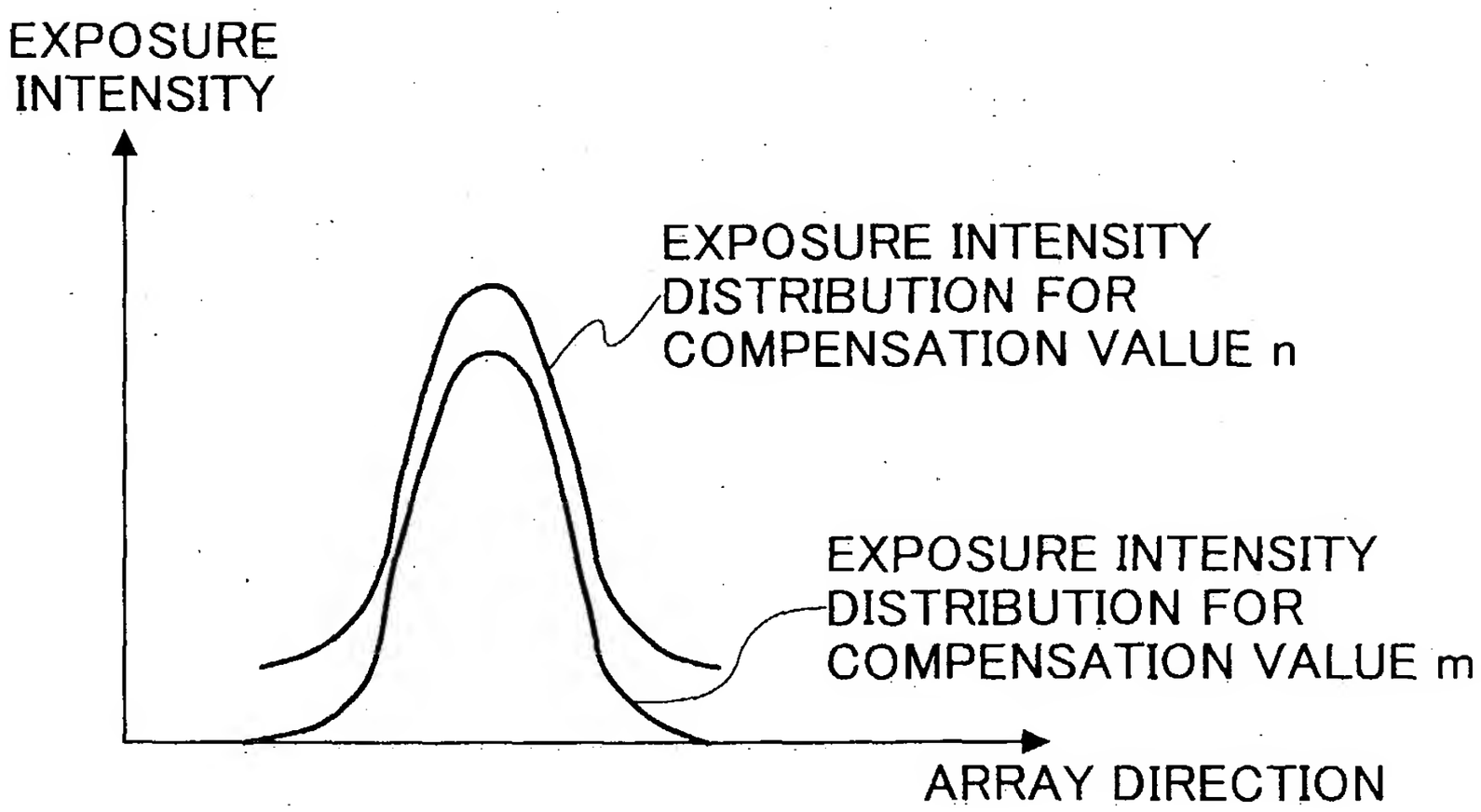

EXPOSURE INTENSITY
EXPOSURE INTENSITY DISTRIBUTION FOR COMPENSATION VALUE n
EXPOSURE INTENSITY DISTRIBUTION FOR COMPENSATION VALUE m
ARRAY DIRECTION

FIG.19

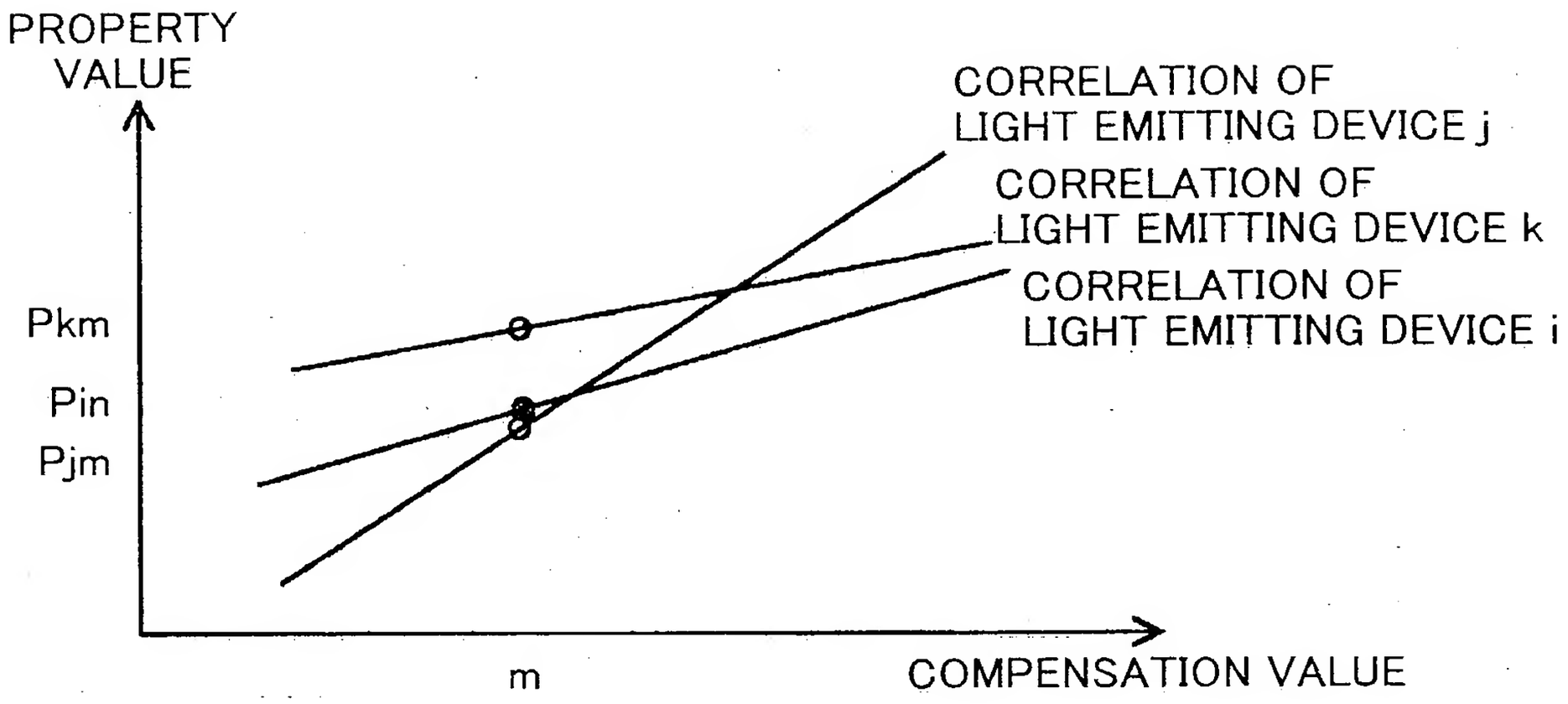

PROPERTY VALUE
CORRELATION OF LIGHT EMITTING DEVICE j
CORRELATION OF LIGHT EMITTING DEVICE k
CORRELATION OF LIGHT EMITTING DEVICE i
Pkm
Pin
Pjm
m
COMPENSATION VALUE

FIG.20

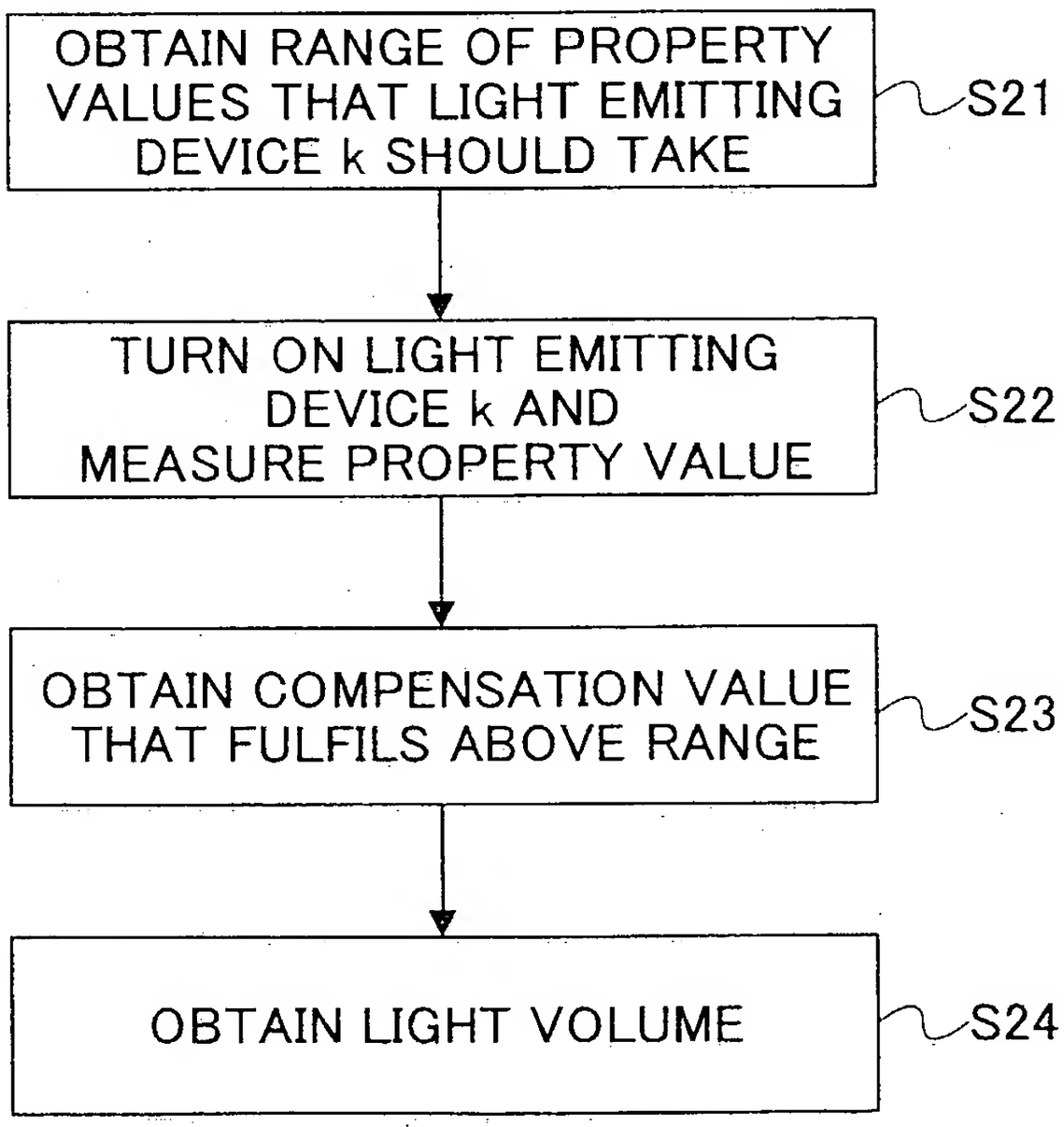

OBTAIN RANGE OF PROPERTY VALUES THAT LIGHT EMITTING DEVICE k SHOULD TAKE
S21
TURN ON LIGHT EMITTING DEVICE k AND MEASURE PROPERTY VALUE
S22
OBTAIN COMPENSATION VALUE THAT FULFILS ABOVE RANGE
S23
OBTAIN LIGHT VOLUME
S24

FIG.21

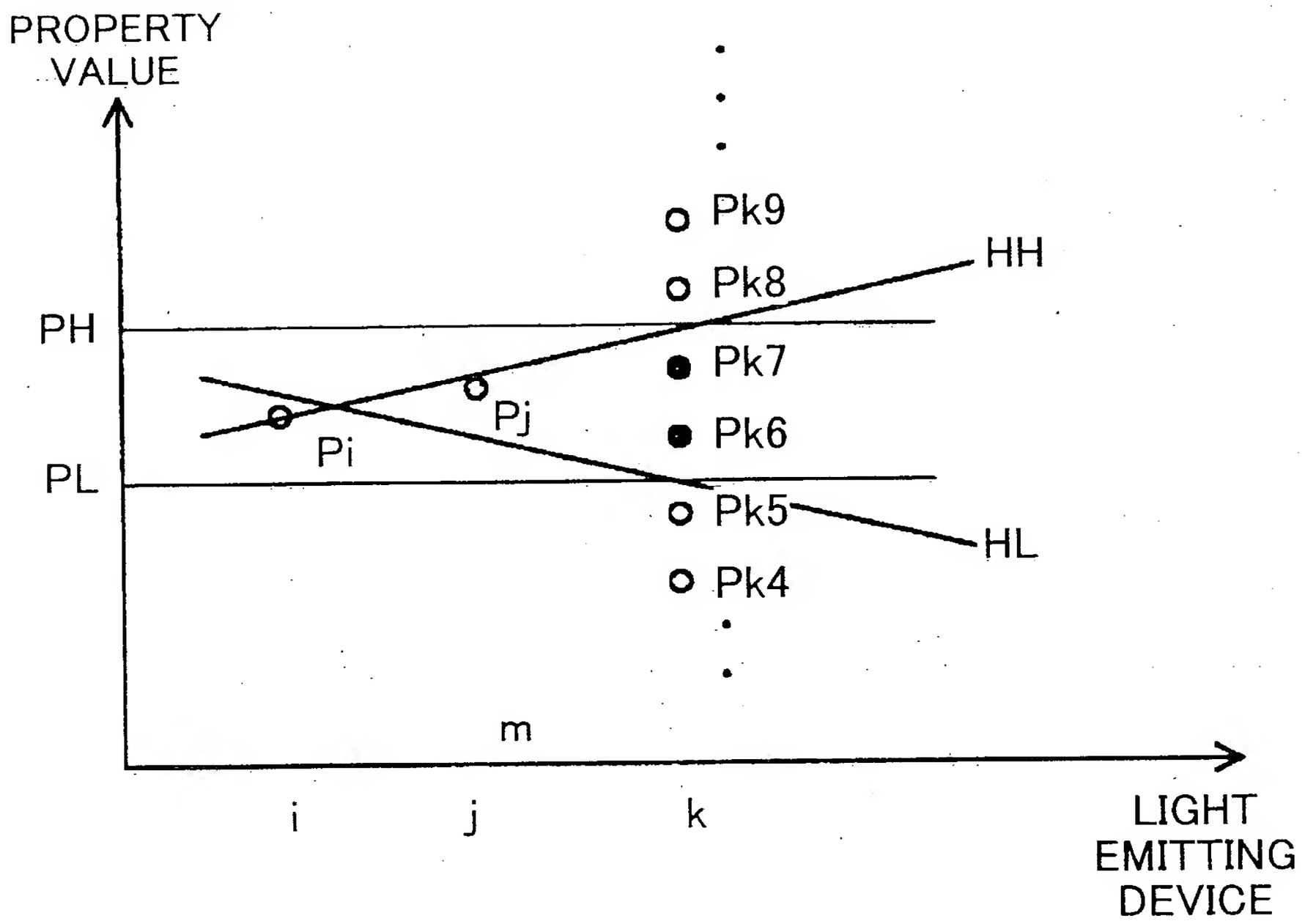

PROPERTY VALUE
Pk9
Pk8
HH
PH
Pk7
Pj
Pi
Pk6
PL
Pk5
HL
Pk4
m
i
j
k
LIGHT EMITTING DEVICE

FIG.22

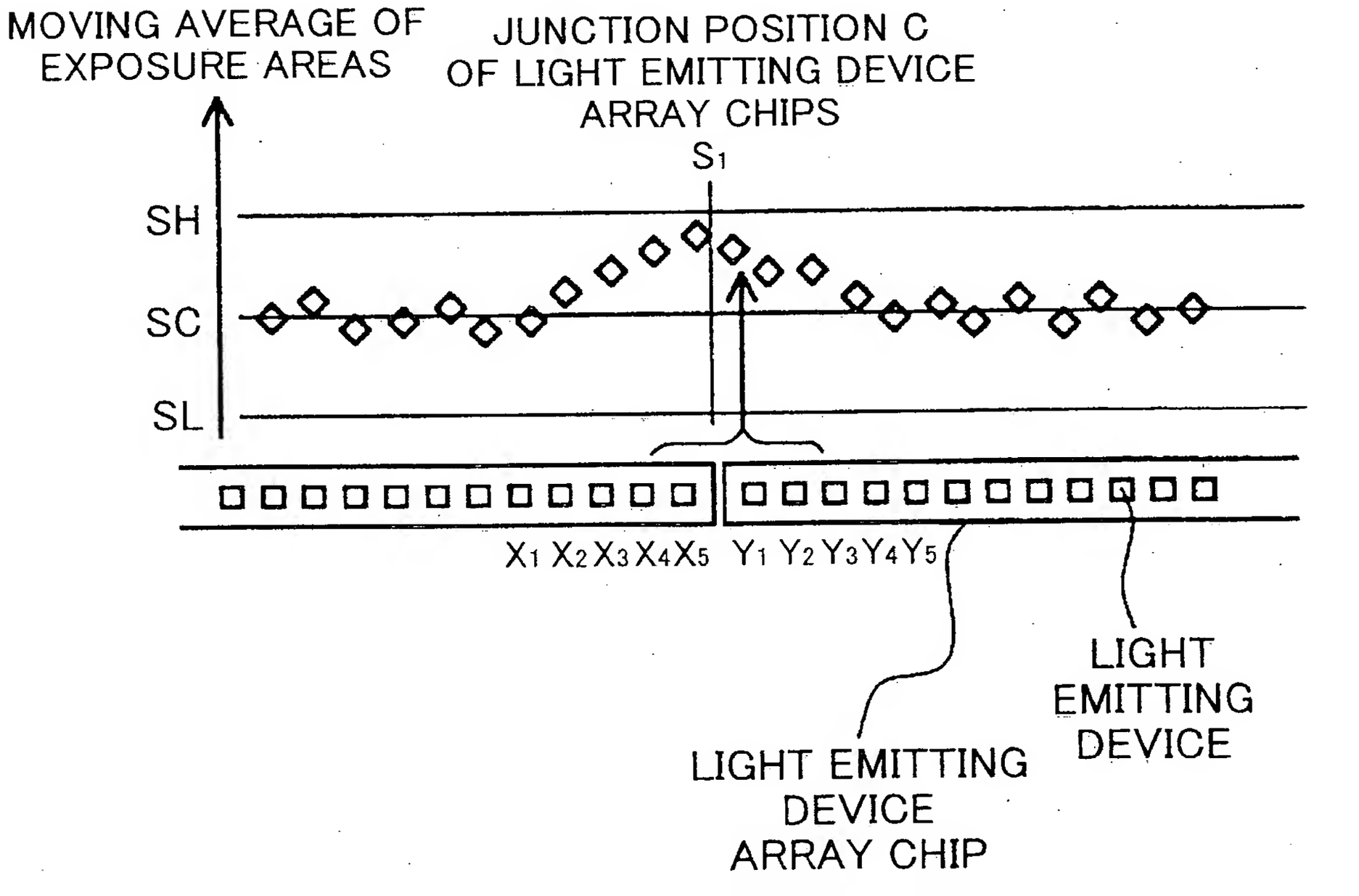

MOVING AVERAGE OF EXPOSURE AREAS
JUNCTION POSITION C OF LIGHT EMITTING DEVICE ARRAY CHIPS
S1
SH
SC
SL
X1 X2 X3 X4 X5 Y1 Y2 Y3 Y4 Y5
LIGHT EMITTING DEVICE ARRAY CHIP
LIGHT EMITTING DEVICE

FIG.23

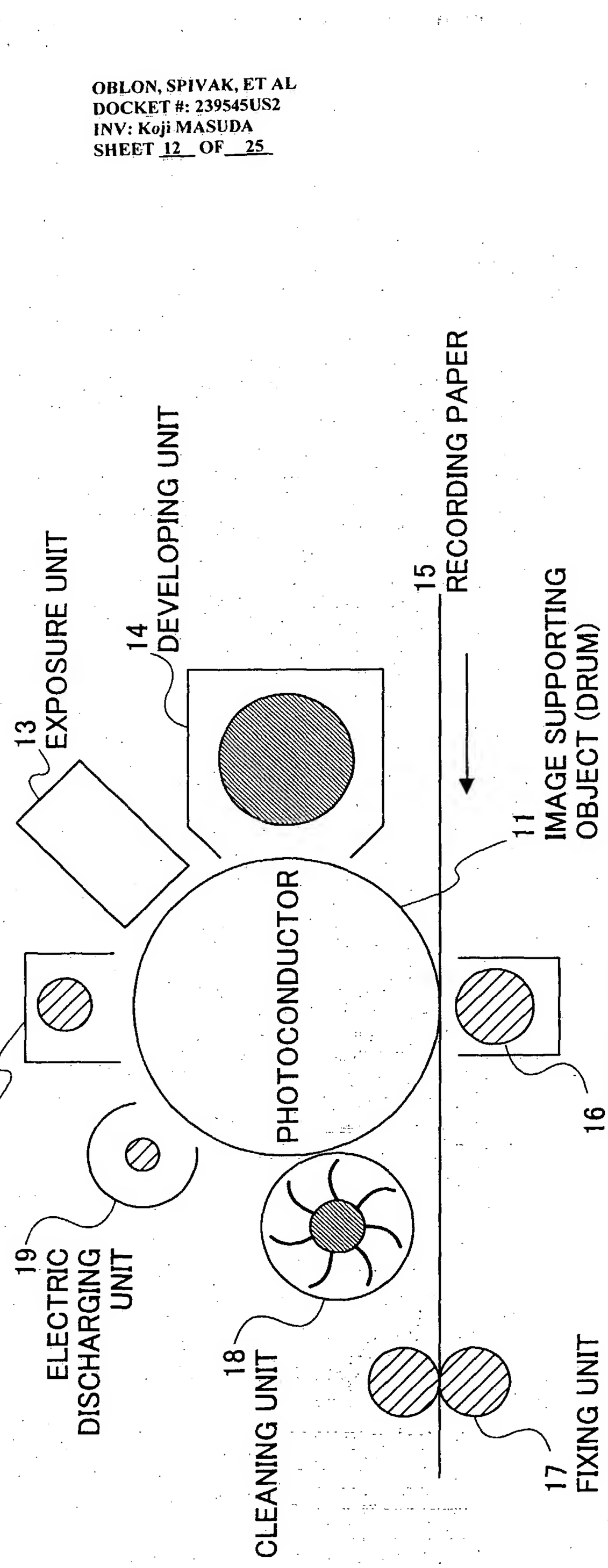
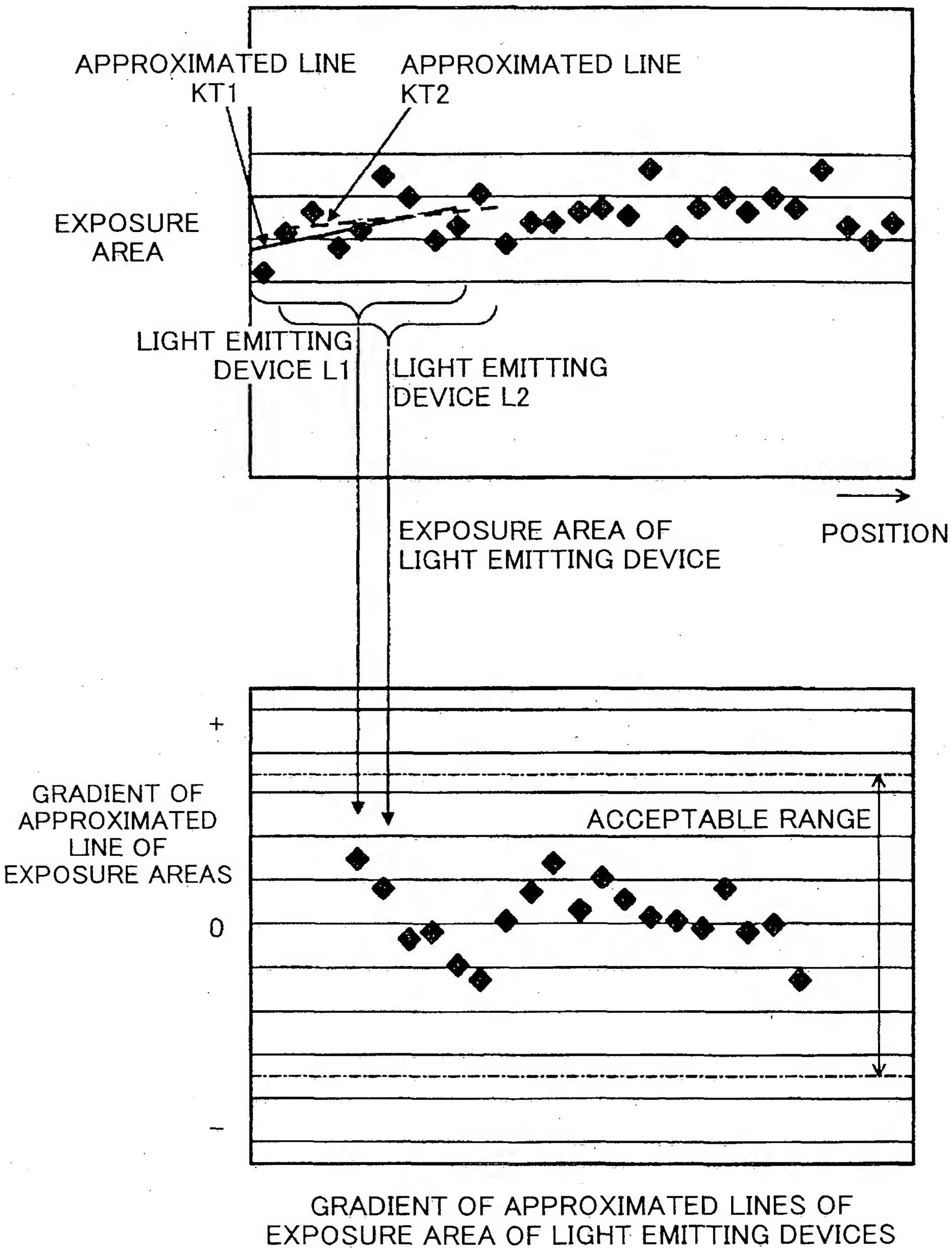
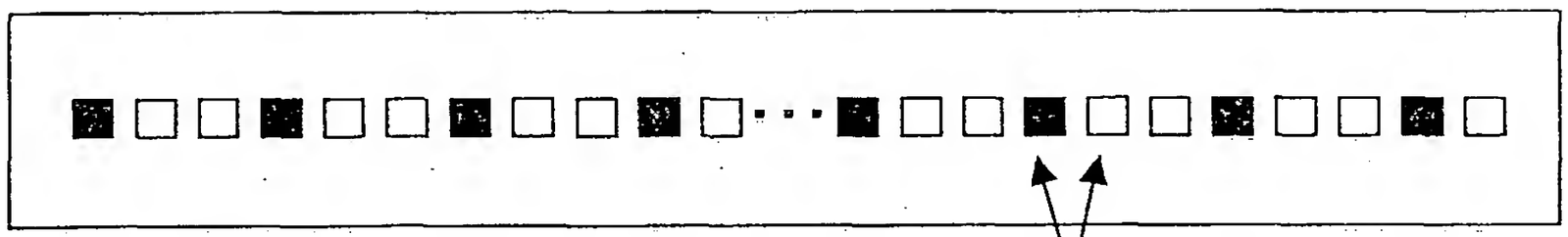

12 ELECTRIFICATION UNIT
13 EXPOSURE UNIT
14 DEVELOPING UNIT
15 RECORDING PAPER
PHOTOCONDUCTOR
11 IMAGE SUPPORTING OBJECT (DRUM)
16 IMPRINT UNIT
19 ELECTRIC DISCHARGING UNIT
18 CLEANING UNIT
17 FIXING UNIT

FIG.24



GRADIENT OF APPROXIMATED LINES OF EXPOSURE AREA OF LIGHT EMITTING DEVICES

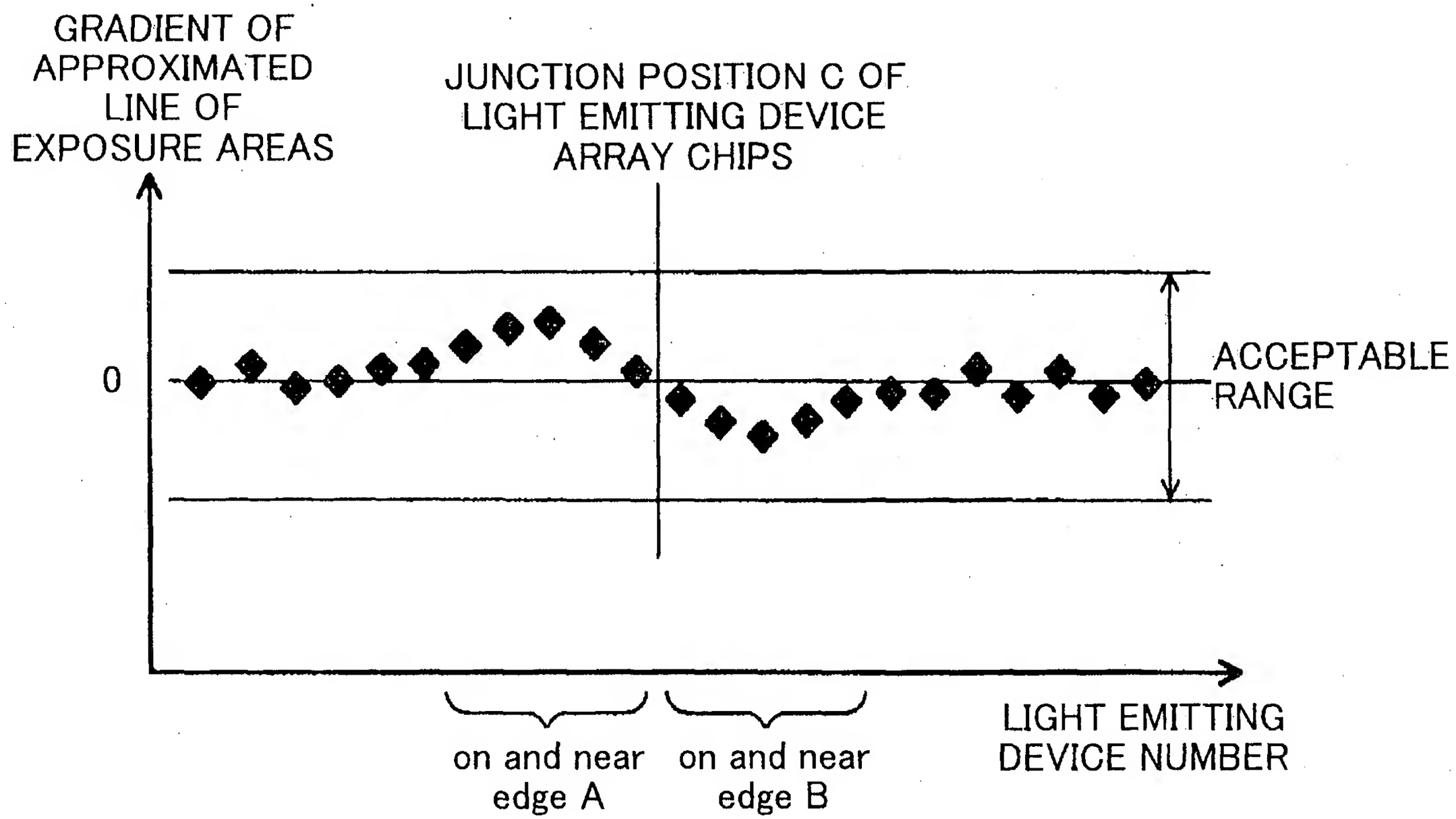
FIG.25



LIGHT EMITTING DEVICE
ARRAY CHIP

EVERY THIRD LIGHT EMITTING DEVICES SELECTED

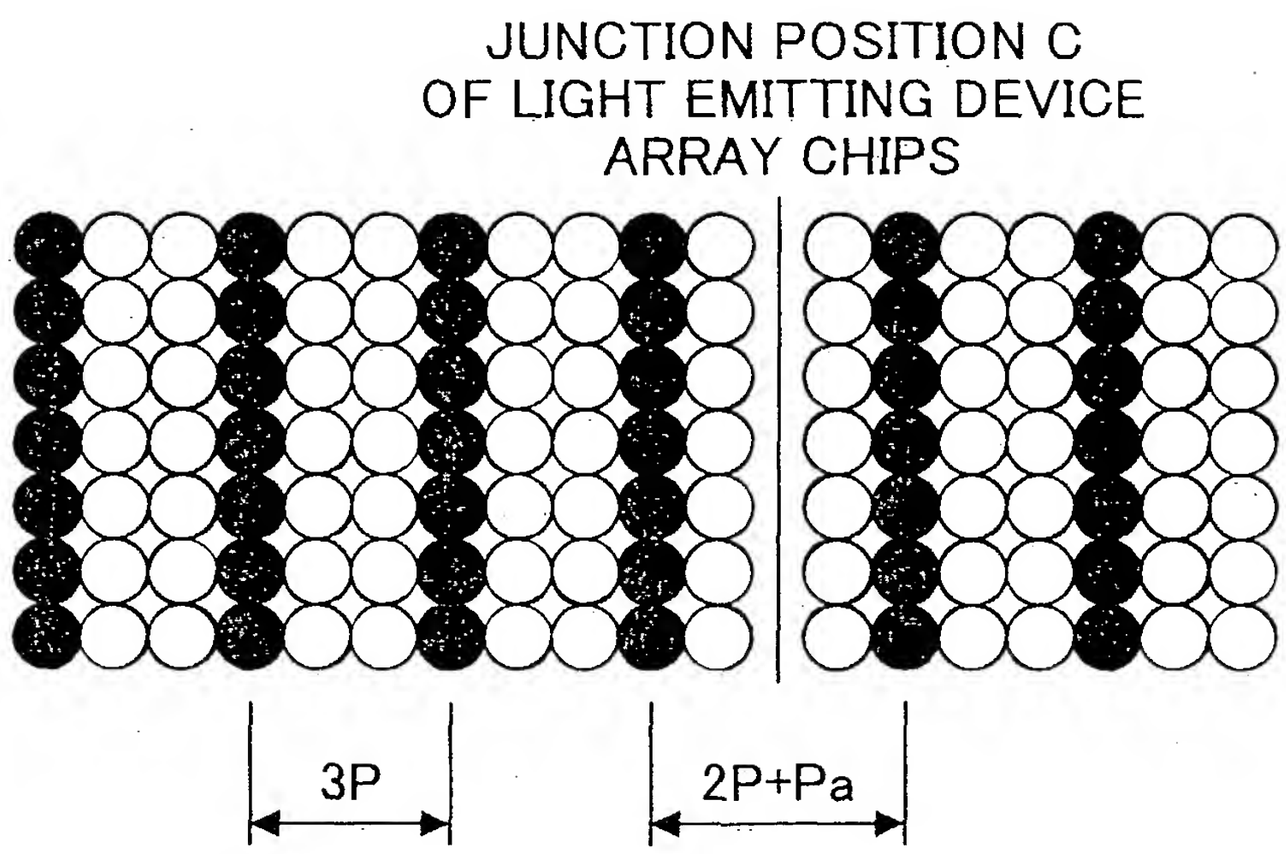
FIG.26



WHERE Pa>P

OBLON, SPIVAK, ET AL
DOCKET #: 239545US2
INV: Koji MASUDA
SHEET 15 OF 25

FIG.27



WHERE 3P<2P+Pa

FIG.28

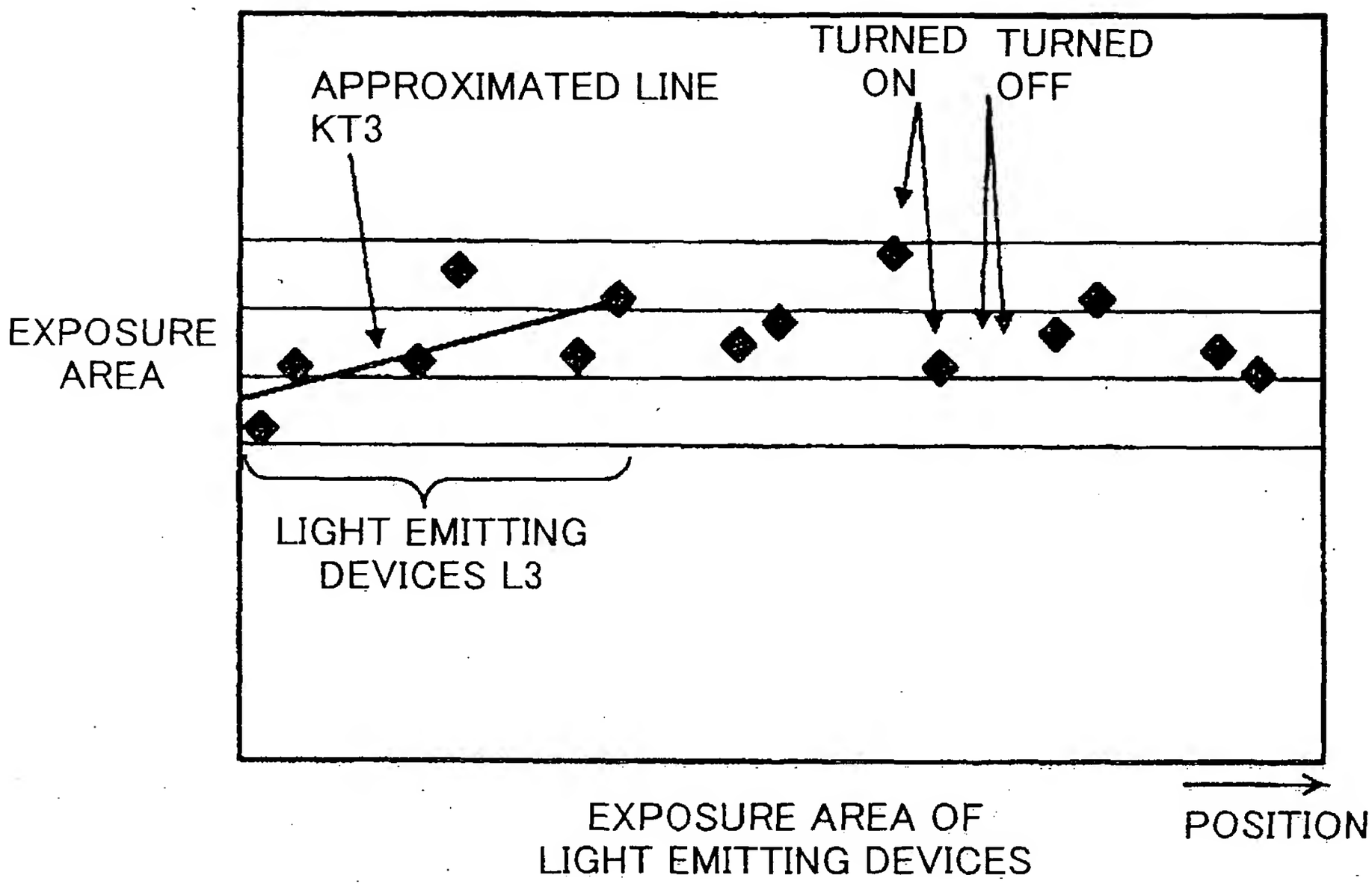


FIG.29A

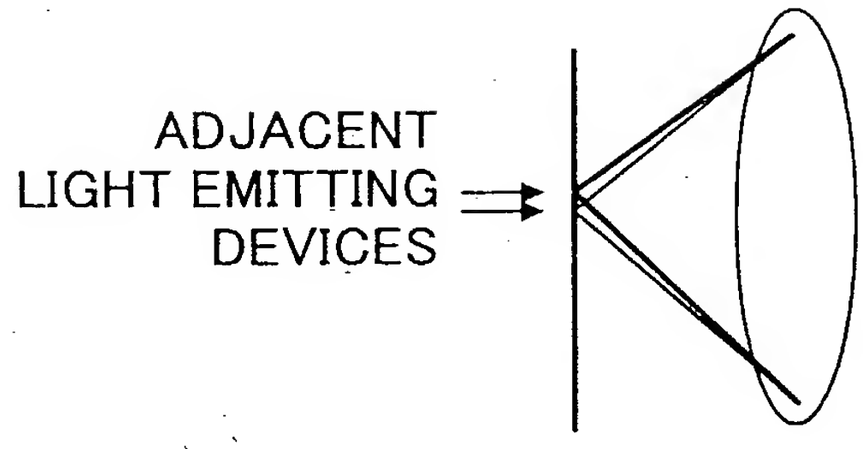


FIG.29B

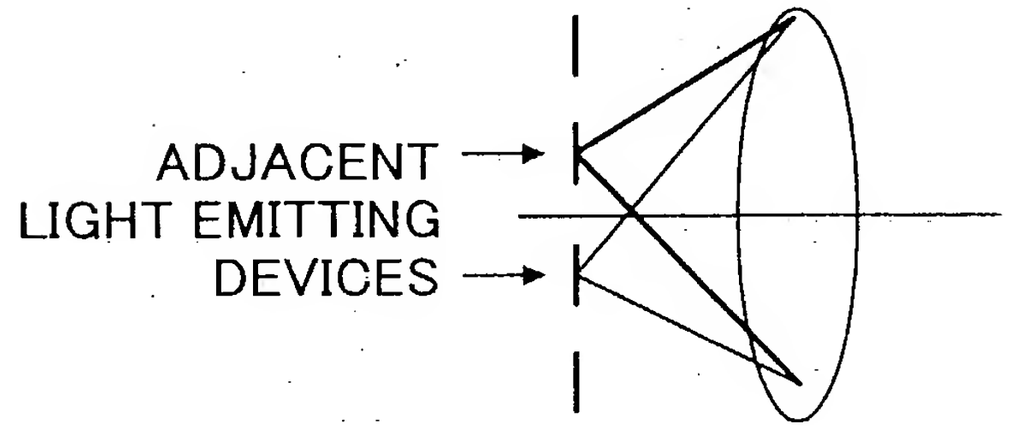


FIG.30

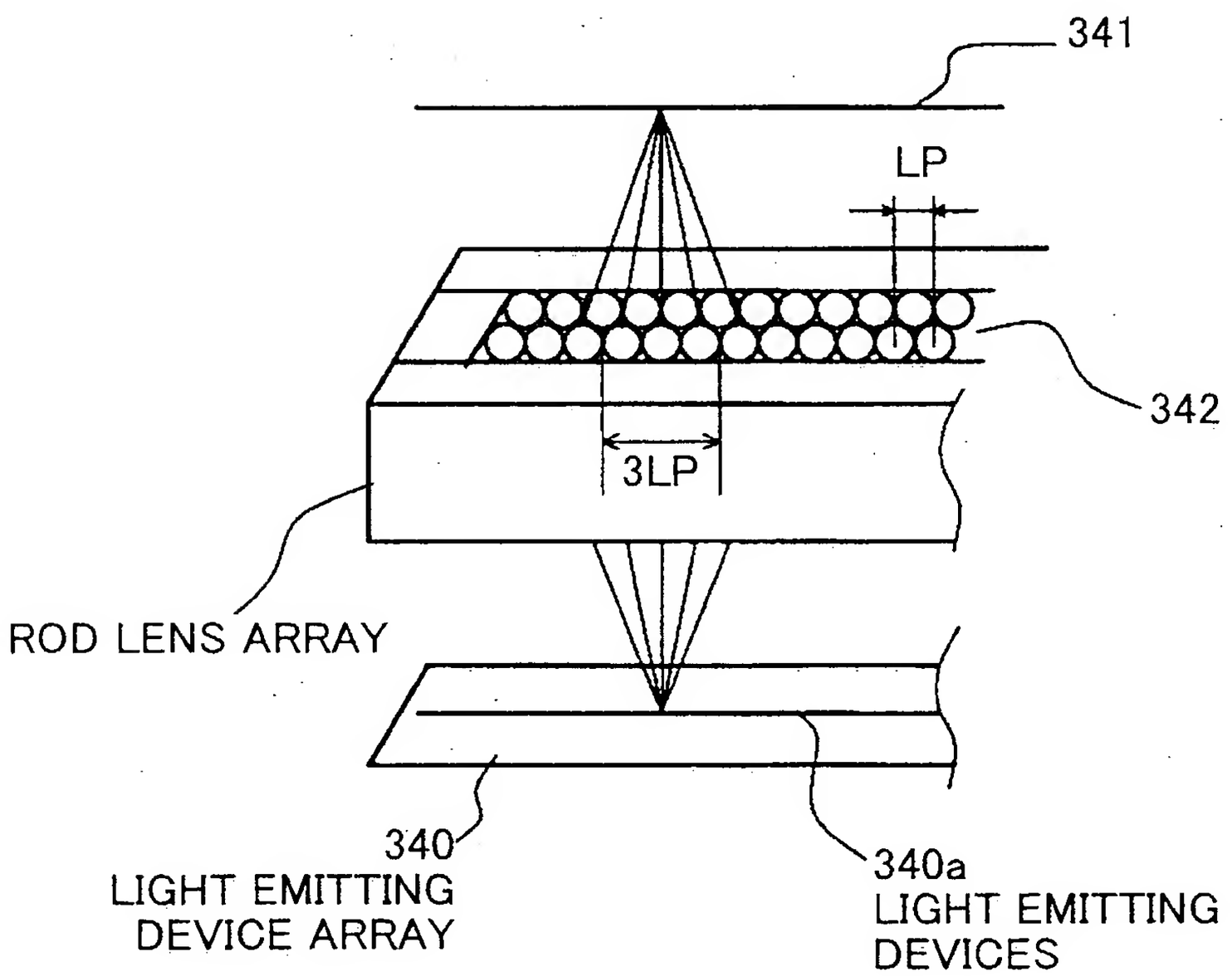


FIG.31

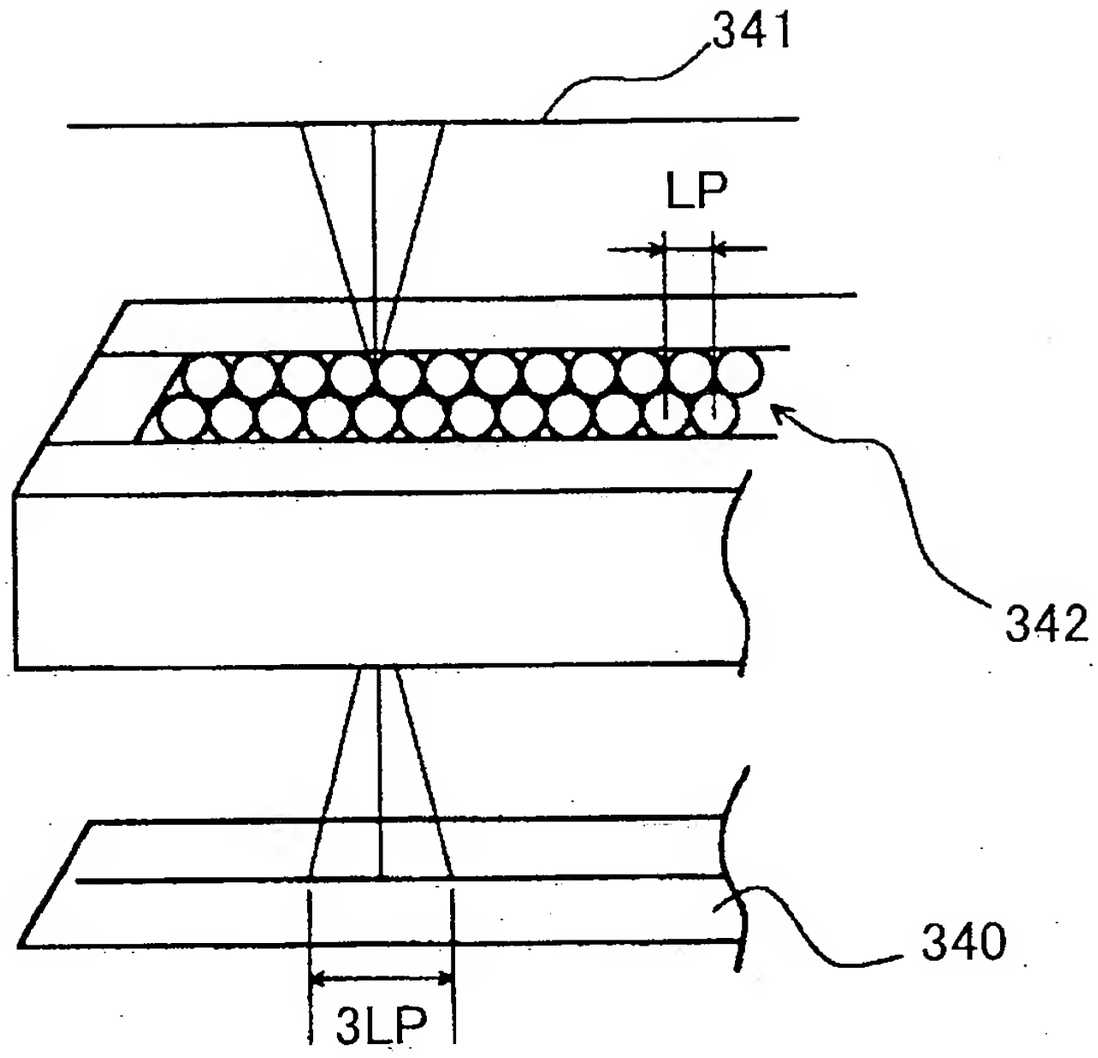


FIG.32

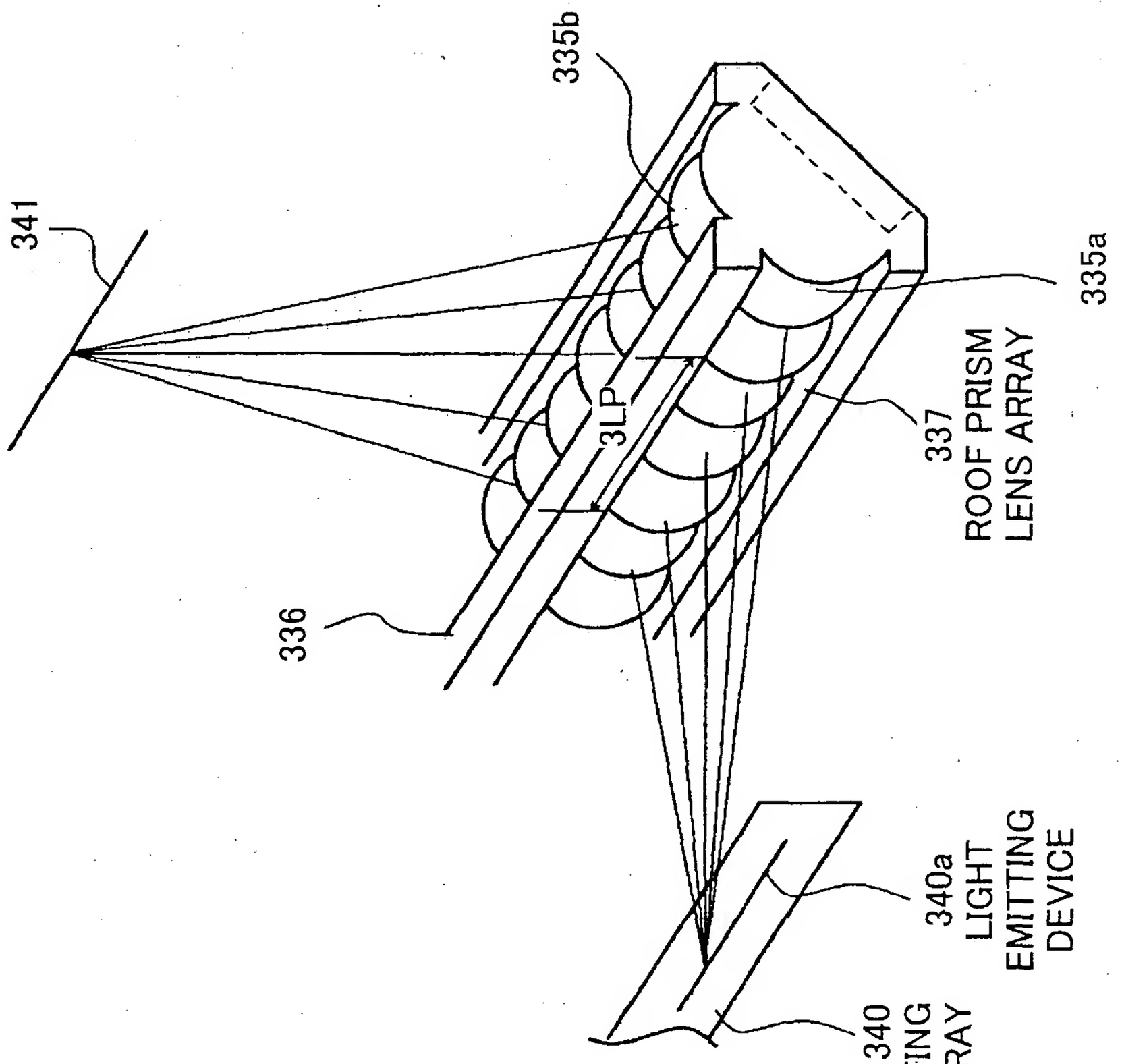

341
336
335b
3LP
337
ROOF PRISM
LENS ARRAY
335a
340
LIGHT EMITTING
DEVICE ARRAY
340a
LIGHT
EMITTING
DEVICE

FIG.33

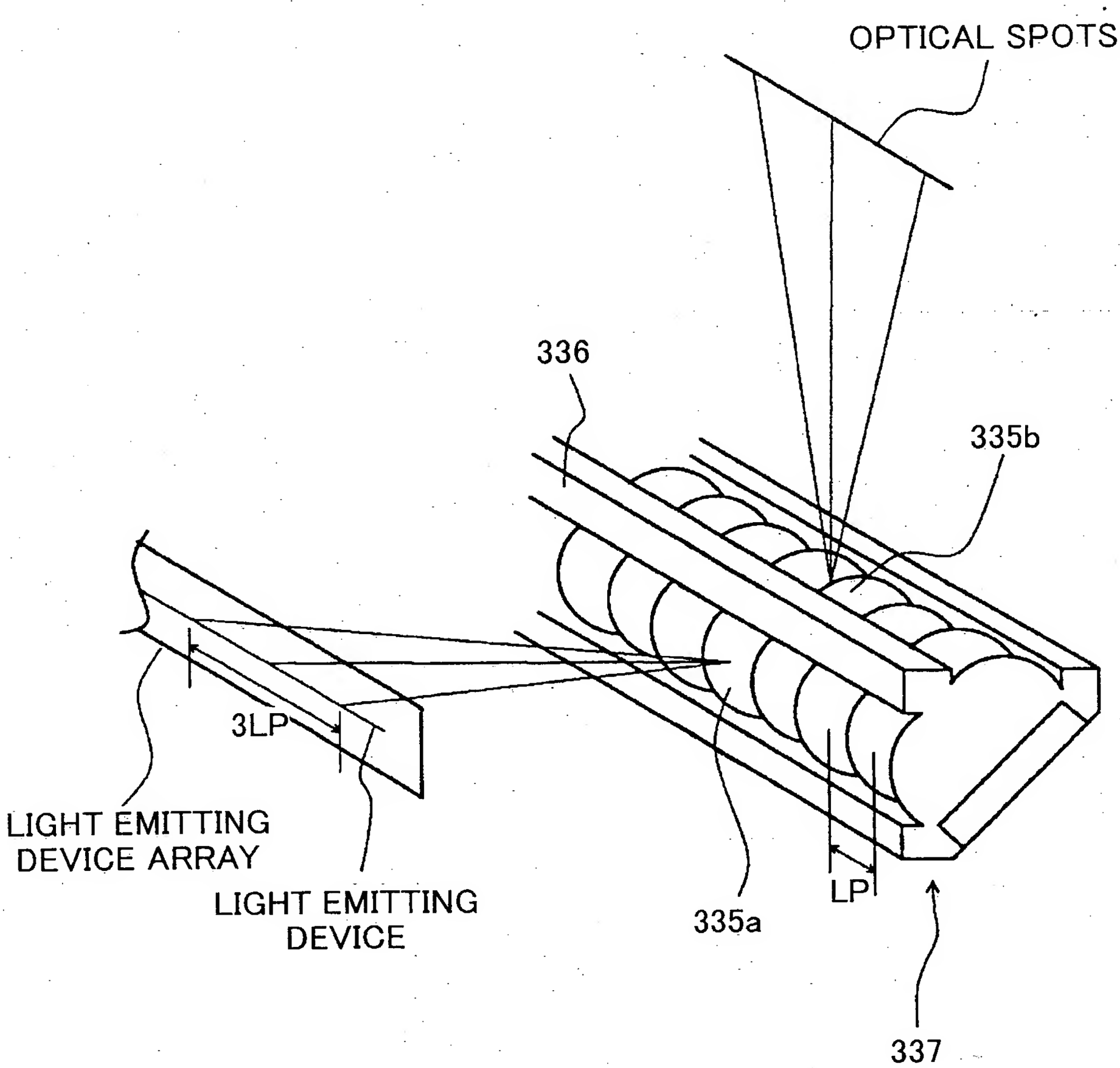
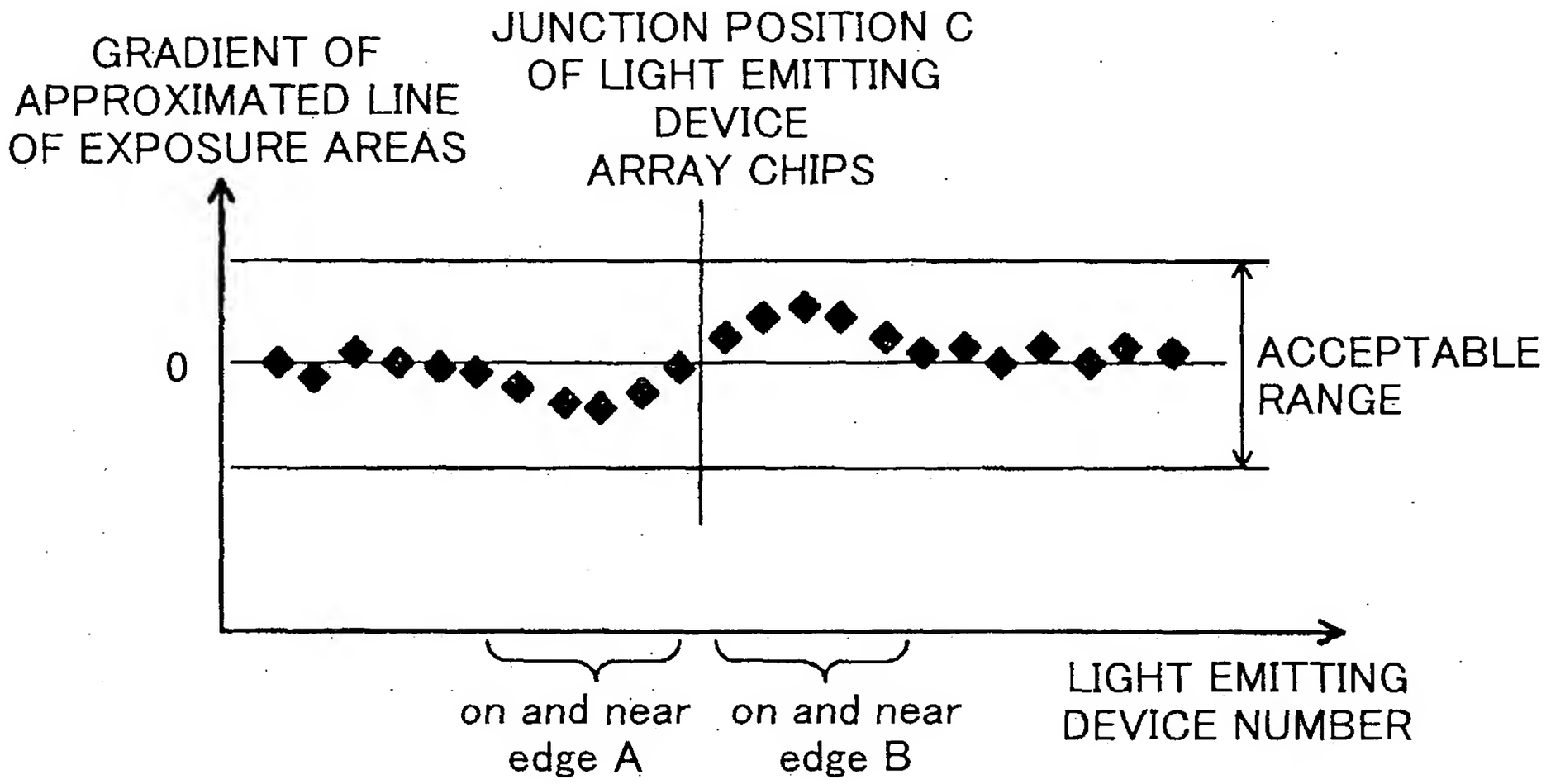

OPTICAL SPOTS
336
335b
3LP
LIGHT EMITTING DEVICE ARRAY
LIGHT EMITTING DEVICE
335a
LP
337

FIG.34



WHERE Pa<PL

FIG.35

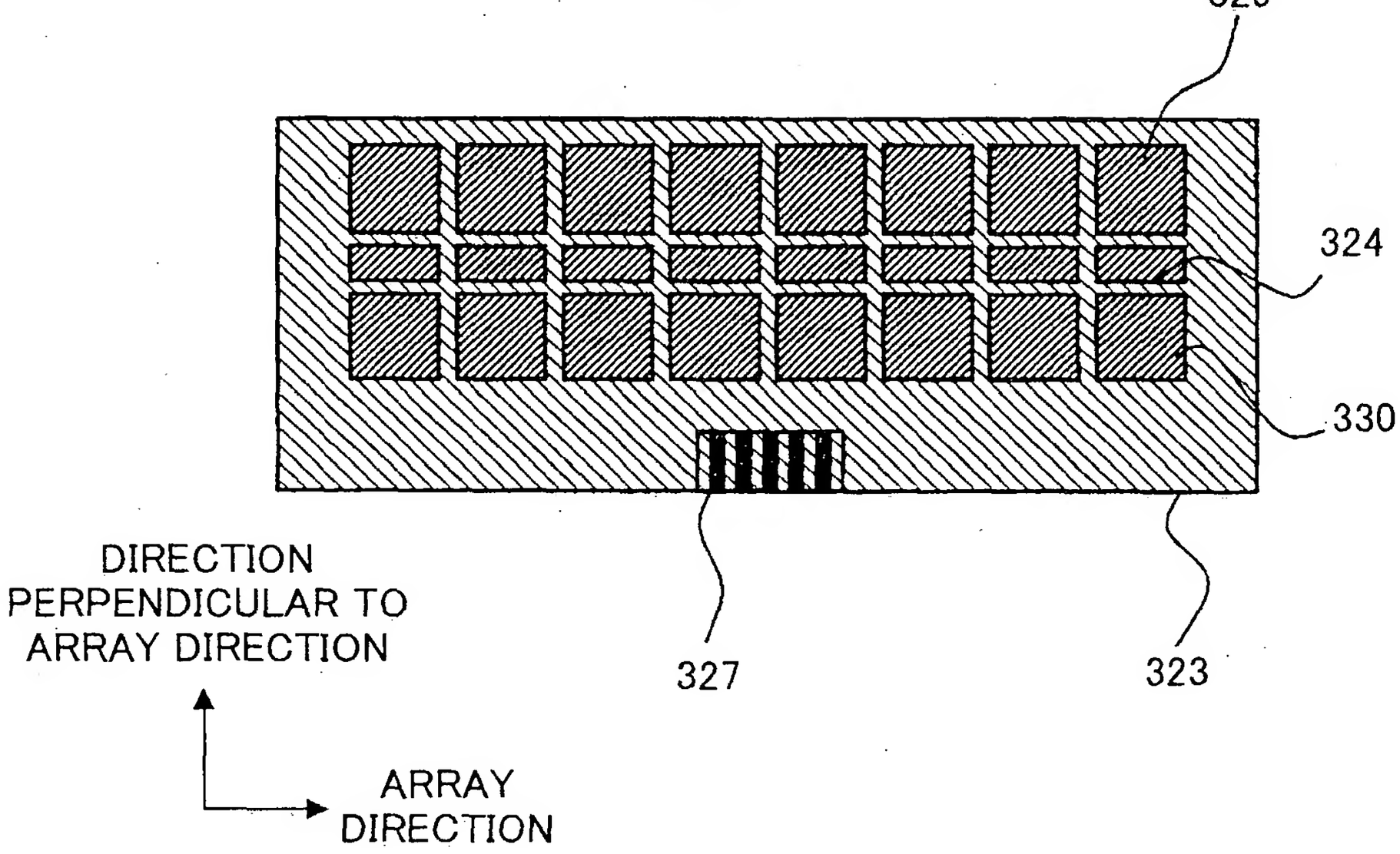


FIG.36

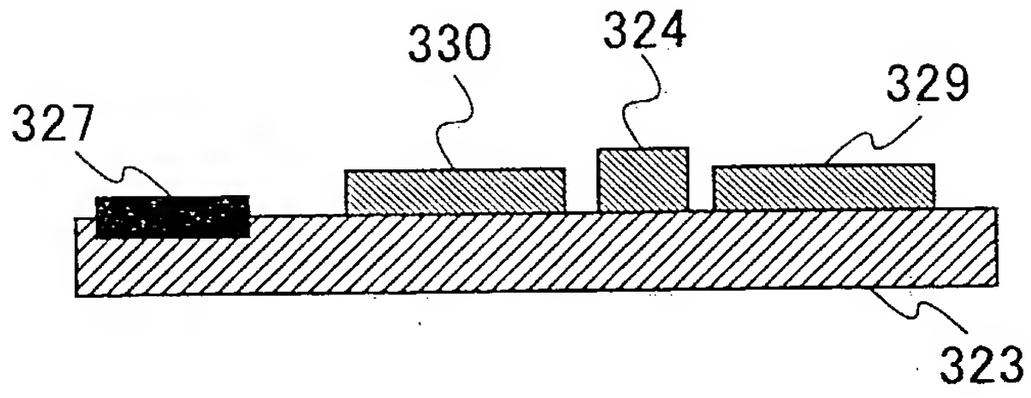


FIG.37

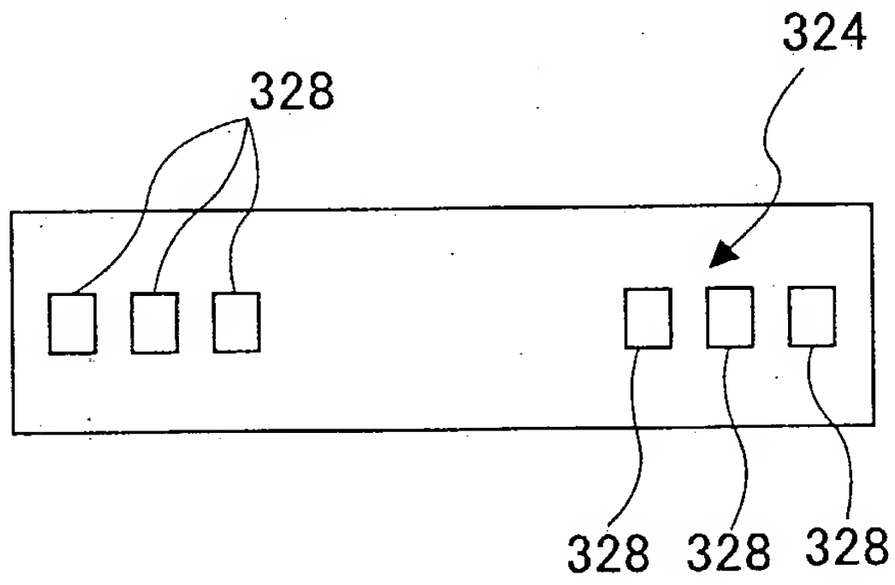


FIG.38

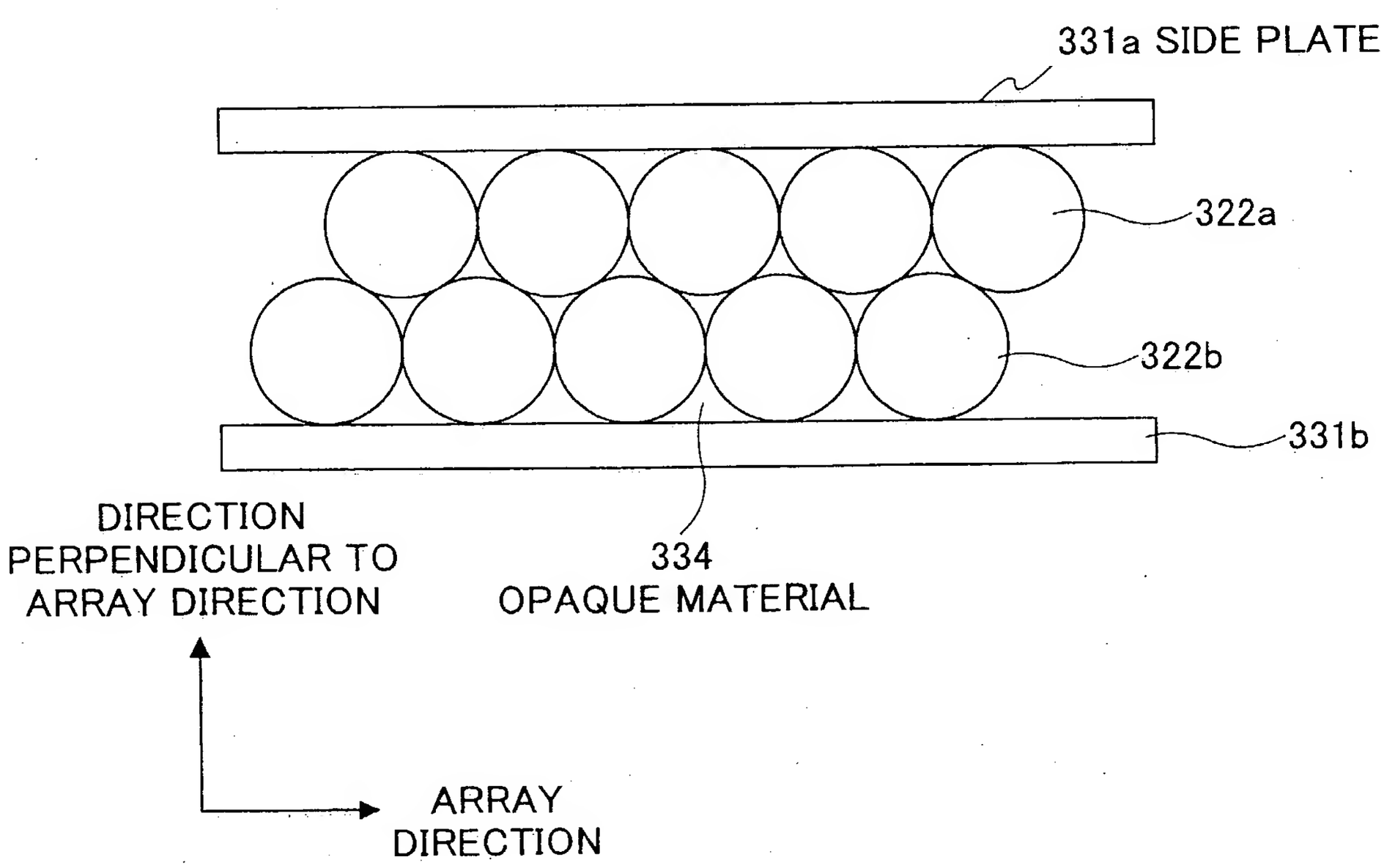


FIG.39

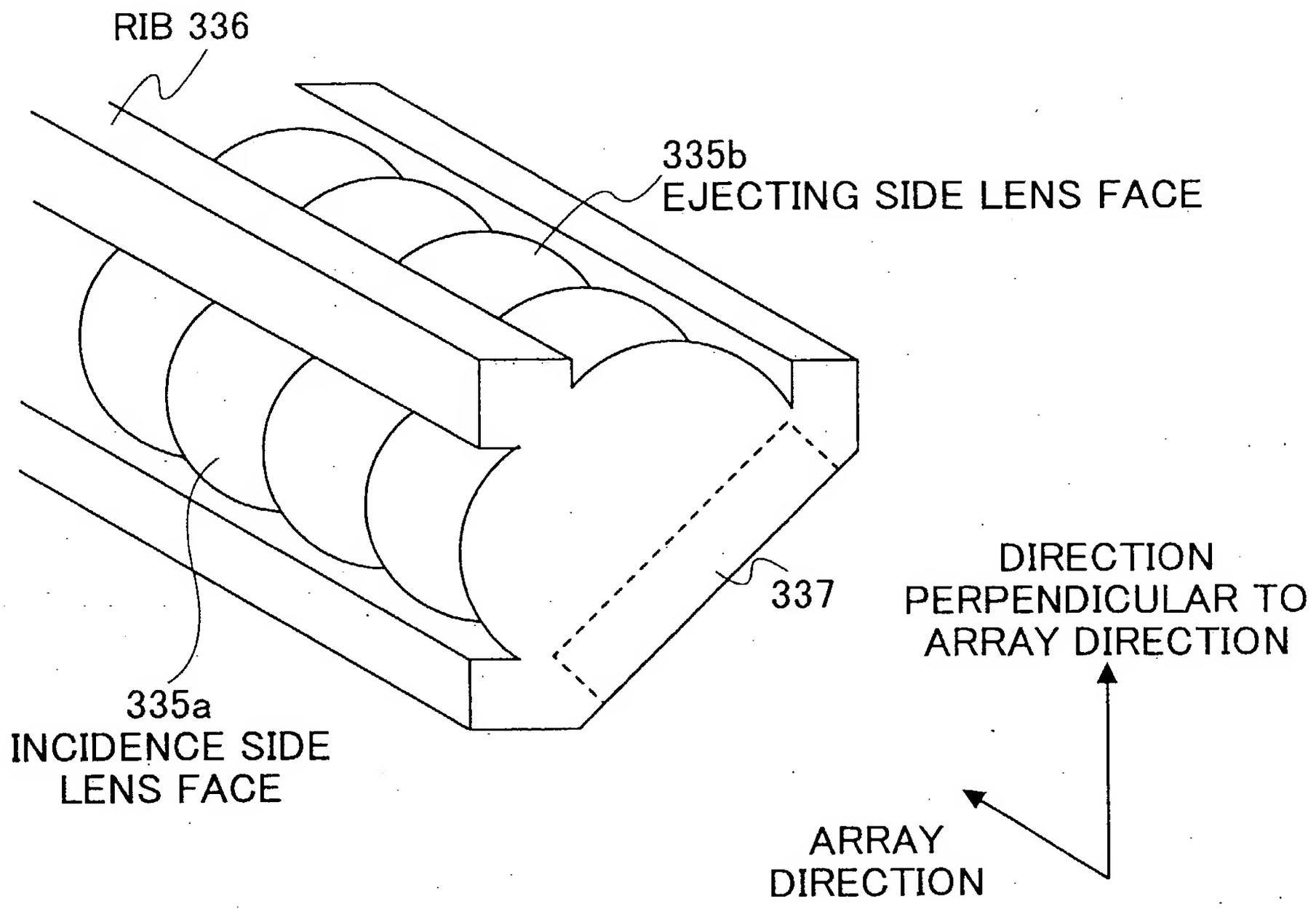

RIB 336
335b
EJECTING SIDE LENS FACE
337
335a
INCIDENCE SIDE
LENS FACE
DIRECTION
PERPENDICULAR TO
ARRAY DIRECTION
ARRAY
DIRECTION

FIG.40

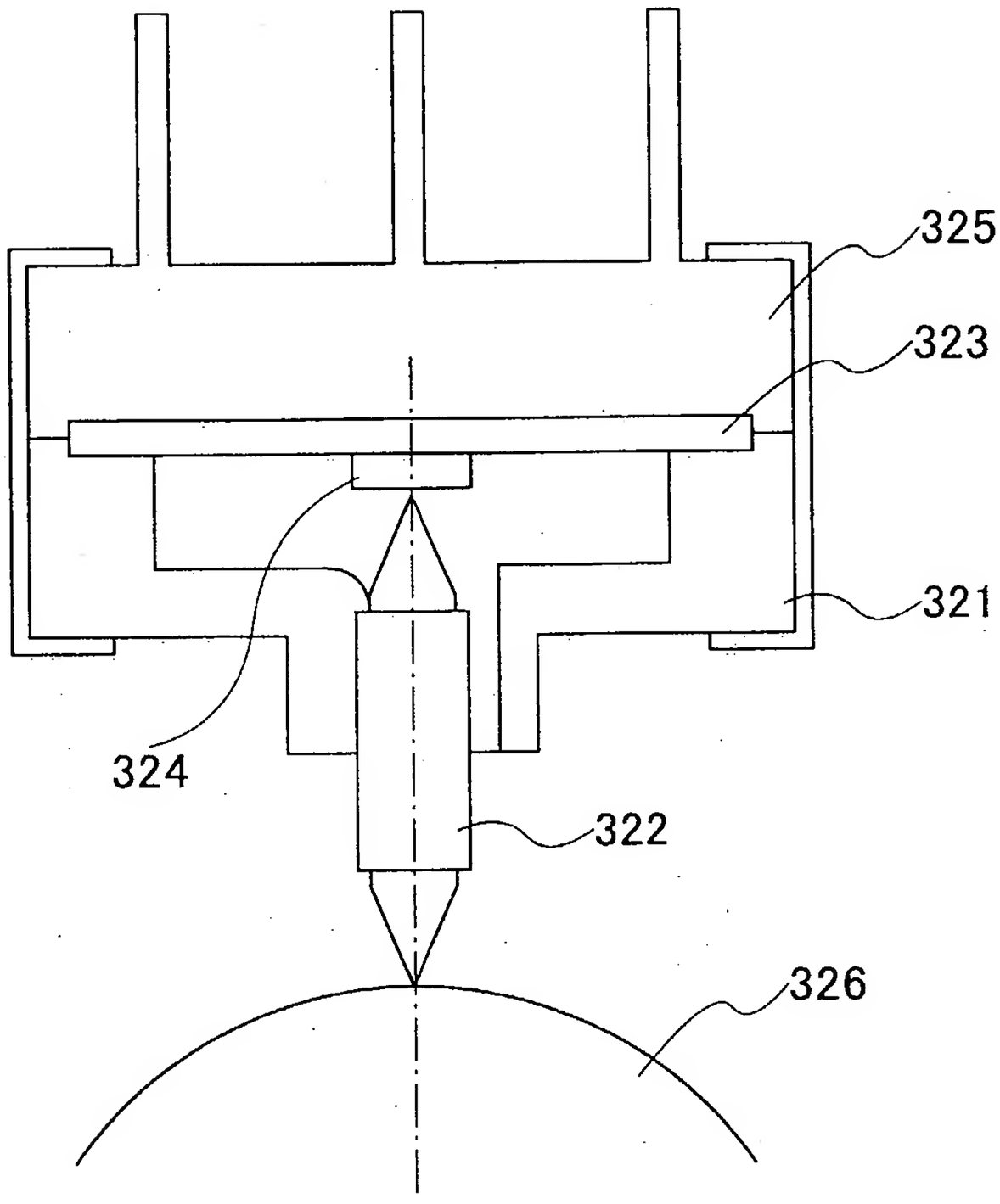
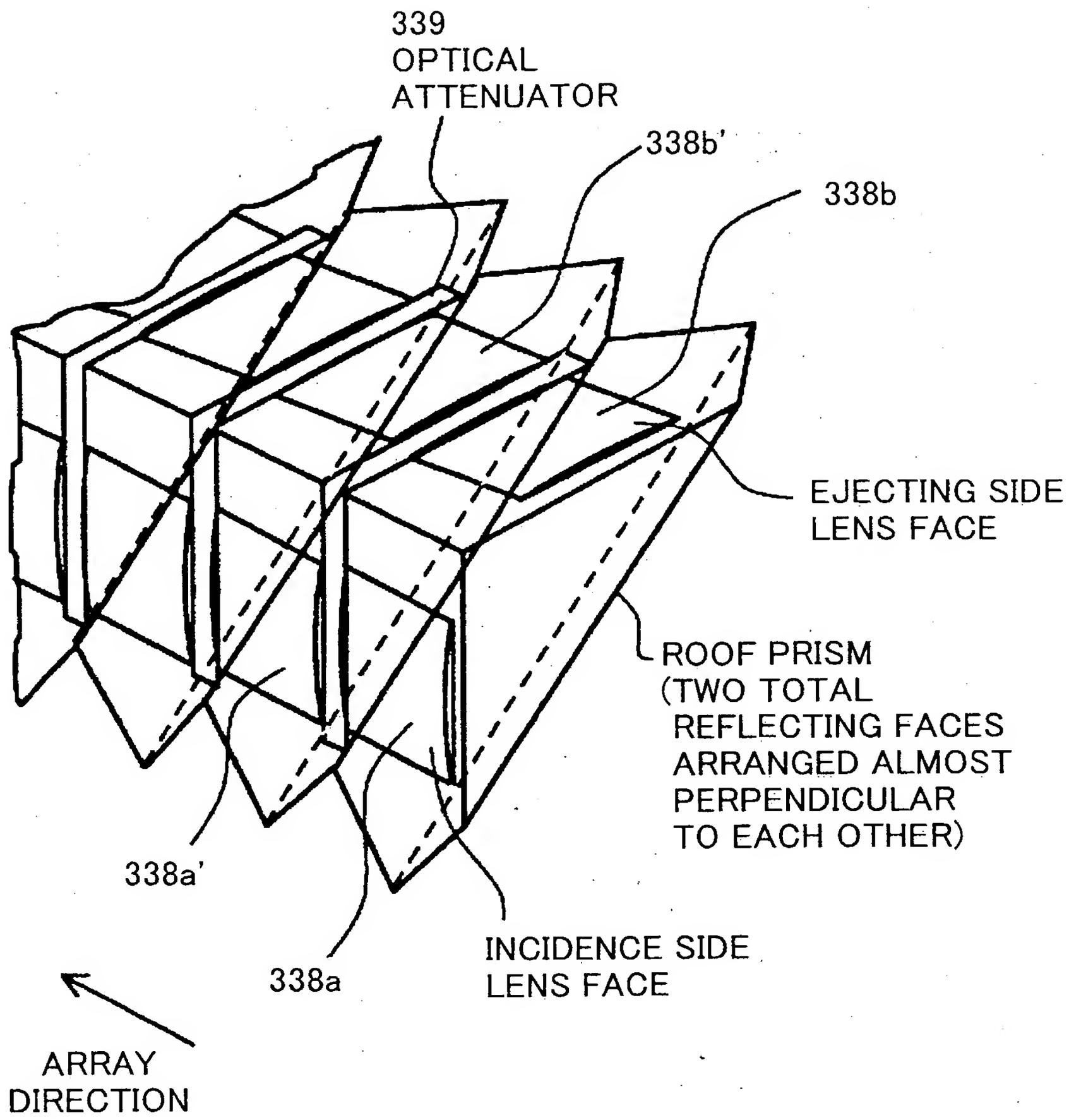


FIG.41


339
OPTICAL
ATTENUATOR
338b'
338b
EJECTING SIDE
LENS FACE
ROOF PRISM
(TWO TOTAL
REFLECTING FACES
ARRANGED ALMOST
PERPENDICULAR
TO EACH OTHER)
338a'
338a
INCIDENCE SIDE
LENS FACE
ARRAY
DIRECTION